NEW EQUIPMENT DIGEST

A Penton Publication

March, 1957

Volume 22—Number 3

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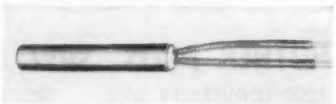
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

ELECTRIC HEATING UNIT
has sheath temperature of 1800° F



Long cartridge life as well as a high potential in watts densities and operating temperatures are featured by the Firerod electric heating unit. Test unit measuring ½ x 2¼ in. and rated 115 v, 250 w for a watt density of 90 w per square in. has been operated in open air for up to 720 continuous hours at sheath temperature of 1800° F. Units are being used in titanium forming dies which sometimes are operated at up to 1700° F. Made by **Watlow Electric Mfg. Co.,** 1374 Ferguson Ave., St. Louis 14, Mo.

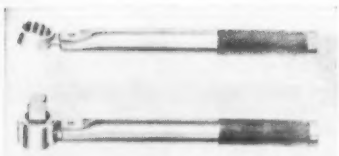
▲ For more details circle **NED-1 C7** on enclosed inquiry slip ▲

ADJUSTABLE SHELVING
clips and studs are readily changed

Only a screwdriver and a few seconds are needed to install or adjust Clip-Type Convertible shelves, supported by four clips and studs. Keyhole slot in clip slips over the threads of a screw type stud. It is locked securely to the upright with a half turn of the stud. Lower extrusion on the clip fits into hole in the upright to prevent turning and to add to weight-carrying capacity. Parts are cadmium plated to prevent corrosion. Made by **Republic Steel Corp.,** Berger Div., 1000 Belden Ave. N. E., Canton 5, O.

▲ For more details circle **NED-2 C7** on enclosed inquiry slip ▲

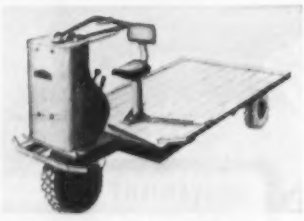
TORQUE TOOLS
in ratchet or square drives



Desired torque is preset in the handle of Midget Microset torque tools. Measuring from 6 to 10 in. long, these tools are offered in wide range of ounce-inch and pound-inch ratings. Box or open end and ratchet or square drive types are available. Made by **Apco Mossberg Co.,** 102 Lamb St., Attleboro, Mass.

▲ For more details circle **NED-3 C7** on enclosed inquiry slip ▲

MOTOR TRUCK
carries 1500 lb, pulls 3500 lb



Jobs too heavy for hand trucks and too light for heavy, expensive equipment are easily handled by this Multiton-Excelsior gasoline powered motor truck. Powered by Briggs & Stratton four-cycle engine that consumes only 1 pt of fuel per hour, unit has capacity of 1500 lb, low bed for easy loading and a pull capacity of 3500 lb. Three speeds forward and reverse, three wheel brakes, simple controls and abrasion-resistant pneumatic tires are among the features. Special body designs are obtainable. Made by **Stokvis-Edera & Co.,** Dept. NE, 18 Secatoag Ave., Port Washington, N. Y.

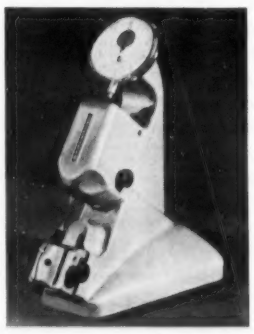
▲ For more details circle **NED-4 C7** on enclosed inquiry slip ▲

LPG-ELECTRIC POWER UNIT
fits electric powered hand trucks

Bantam-sized model W12 LPG-electric power unit can be quickly installed on any make electric hand truck with power compartment of adequate size. It provides continuous duty electric power, plus economy and low maintenance of LP-gas operation. Removable end plate and hinged cover plate allow access to engine and generator for servicing. Unit accommodates interchangeable 20-lb fuel cylinder and features a quick disconnect fuel line coupling for added safety. Conversion to LPG-electric drive can be accomplished in the field. Made by **Ready-Power Co.,** 3832 Grand River Ave., Detroit 8, Mich.

▲ For more details circle **NED-5 C7** on enclosed inquiry slip ▲

THREAD GAGE
checks, indicates pitch diameters



Any threaded part having external screw threads up to 1½ in. diameter and of any specified pitch can be checked for pitch diameter by this indicating thread gage. It obtains readings mechanically from 0 in. upward on a dial graduated in 0.0001-in. More precise measurements can be obtained by use with single-column Precisionaire air gages, Plunjet air gaging cartridges, or electronic Accutron amplifier and Electrojet pick-up unit. Knob selects 16 or 40-oz gaging pressure, or others if specified. Setup is made from a master thread plug or previously calibrated part. Made by **Sheffield Corp.,** 721 Springfield St., Dayton 1, O.

▲ For more details circle **NED-6 C7** on enclosed inquiry slip ▲

PNEUMATIC TAPPING HEAD
handles No. 0 to ¾-16 taps

Production, general purpose or precision tapping can be done by the Pneu-Matic high speed tapper which can be mounted on any drill press. Rapid approach, tapping, reversal and withdrawal are automatically controlled. Tapper repeats preset cycle each time foot, fixture or hand switch is actuated. A cycle interruption switch gives operator absolute control of unit. Operating on shop air pressure and 115 v ac, tapper handles No. 0 to ¾-16 taps. Unit can be converted to lead screw tapping by replacing main spindle drive with standard Commander lead screw assembly. Made by **Commander Mfg. Co.,** 4221 W. Kinzie St., Chicago 24, Ill.

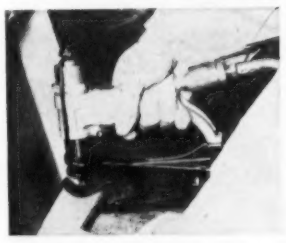
▲ For more details circle **NED-7 C7** on enclosed inquiry slip ▲

MEASURING MAGNIFIER
checks diameters, radii and angles

Linear dimensions are read in both inches and millimeters by this pocket-size measuring magnifier or pocket comparator. Its etched glass reticle can be removed to permit use as a six-power magnifier. Light is admitted to the object being viewed through the transparent walls. Use can be for checking linear dimensions, diameters, radii and angles. Price is $19.50. Made by **Edmund Scientific Corp.,** 180 E. Gloucester Pike, Barrington 21, N. J.

▲ For more details circle **NED-8 C7** on enclosed inquiry slip ▲

AIR-OPERATED STAPLER
improved with stronger parts



More accurate alignment plate, more efficient operating yoke parts and stronger anvil parts are improvements made in the Duo-Fast air plier or stapler. It is designed to staple corners of telescopic type cartons, tops of heavy bags and corrugated inserts. Light in weight and thus portable, it can be taken to the work. Air pressure from 50 to 100-psi line pulls the anvil base up against the plier nose to clinch the staple in place. Regulating air pressure adjusts stapling power. Made by **Fastener Corp.,** 876 Fletcher St., Chicago 14, Ill.

▲ For more details circle **NED-9 C7** on enclosed inquiry slip ▲

CLINCH NUTS
with and without locking feature

Extended line of Gripco clinch nuts now includes No. 4, 6 and 8 sizes, with and without the Gripco locking features. Formerly, only sizes from No. 10 to ⅝-in. were available. All sizes are offered in both fine and course threads. No. 10 and ¼-in. sizes are now smaller across flats and clinching collars. Made by **Grip Nut Co.,** 106 Maple Ave., South Whitley, Ind.

▲ For more details circle **NED-10 C7** on enclosed inquiry slip ▲

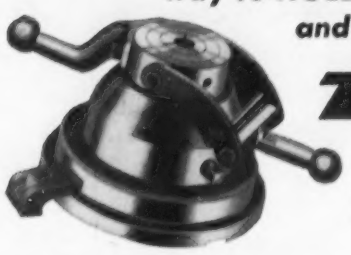
REPRODUCTION MACHINE
makes copies up to 42 in. wide

Drawings, tracings and other material up to 42 in. wide can be reproduced on the compact Streamliner 200 reproduction machine. Dry copies of anything written, printed, typed or drawn on translucent paper are made in a few seconds with no limit as to number. Table model machine is 22 in. high and 27 in. deep. Made by **General Aniline & Film Corp.,** Ozalid Div., 16 Ansco Rd., Johnson City, N. Y.

▲ For more details circle **NED-11 C7** on enclosed inquiry slip ▲

EFFECTIVE EFFICIENT ECONOMICAL

way to HOLD your work— and your business WITH



Zagar COLLET FIXTURES

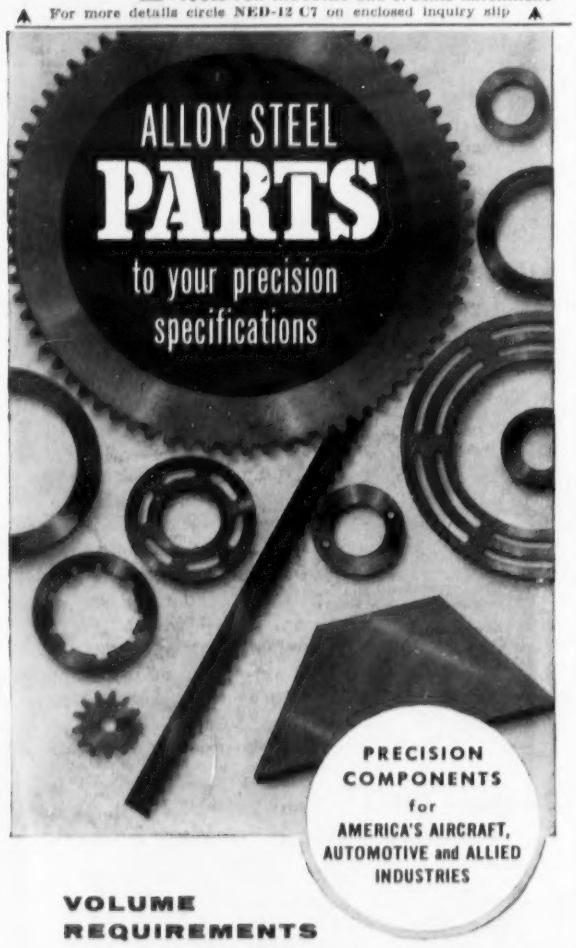
Eliminates special set-ups; cuts time, reduces costs. Precision built to Zagar standards. No vertical movement. Uses standard 5-C draw type collet. Indexes up to 25 positions (4, 6, 8 standard). A long-since proven aid to production *plus accuracy*.

Ask for Catalog N-3.

ZAGAR, INC. 23880 LAKELAND BLVD., CLEVELAND 23, OHIO

Zagar TOOLS FOR INDUSTRY and SPECIAL MACHINERY

▲ For more details circle NED-12 C7 on enclosed inquiry slip ▲



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ATKINS *B-W* will produce parts any size or hardness, machined to any desired finish or tolerance . . . for automotive and aircraft engines and frames, presses and many other types of industrial equipment. Typical items are clutch plates and valve discs; flat steel machine parts; bars, spacer rings and washers; discs, knives and blades for any cutting or scraping operation.

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For Over 100 Years a Distinguished Name in American Industry!

▲ For more details circle NED-13 C7 on enclosed inquiry slip ▲

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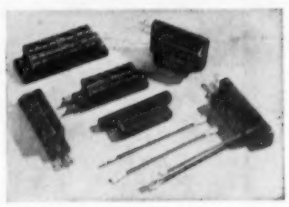
If you have not returned one of our routine Circulation Questionnaires or have not sent us an inquiry within the past year, will you please fill in the coupon on the back of the inquiry slip in this issue? It is self-mailing, and we will pay the postage. This same coupon can be used to request that NEW EQUIPMENT DIGEST be sent to you if you are not now on our circulation list, provided your company and position qualify. The inquiry slips are opposite pages 8 and 104 in this issue.

A. N. Gregg
EDITOR

TERMINAL BLOCKS for rapid multiple assemblies



Method for making rapid, accurate multiple wire assemblies is provided by series of Quick Connect terminal blocks for vertical or horizontal use. They have specific identification for quick assembly, and can be provided with color coding. Insulated, heat resistant blocks are available in many standard designs, various colors and any size or combination. Made by **Rohden Mfg. Co.**, Dept. L, 4739 W. Montrose Ave., Chicago 41, Ill.

▲ For more details circle NED-14 C7 on enclosed inquiry slip ▲

BUCKET ELEVATOR lifts 1000 to 3000 bushels per hour

Dry, free-flowing materials are handled at rates from 1000 to 3000 bushels per hour by model D bucket elevator. Units are available with three different drives in all horsepower ranges as well as with two-way or three-way valves, six-way distributors and other accessories. Models are jig-built by production line methods at **Universal Hoist Co.**, Cedar Falls, Iowa.

▲ For more details circle NED-15 C7 on enclosed inquiry slip ▲

HERE IS EVERYTHING YOU NEED TO KNOW ABOUT METAL **SAWS**

So write for your free copy of this catalog today.

70 years of saw-making experience gives us the authority to talk about saws. Read about segmental saws, hi speed steel saws, sem-hi saws, Stellite tipped saws, carbide saws, etc. Subject includes band saws, slitters, tool bits and steel specialties. If you have anything to do with saws you owe it to yourself to check this catalog.

HUTHER BROS. SAW MFG. CO., INC.
1292 UNIVERSITY AVE. ROCHESTER 7, NEW YORK

▲ For more details circle NED-17 C7 on enclosed inquiry slip ▲

A complete line of power transmission equipment, using one bushing system . . .

Browning is your one source for an integrated line of V-belts and sheaves, roller chain and sprockets, paper pulleys, and rigid, flexible and chain couplings. The entire system employs Browning's unbreakable malleable split taper bushing, which mounts and unmounts easily but won't loosen in usage. Saves time, lowers costs. Thousands of size and bore combinations. Ask Browning distributor or write us for free *Catalog GC101*.

Browning MANUFACTURING COMPANY
MAYSVILLE, KENTUCKY

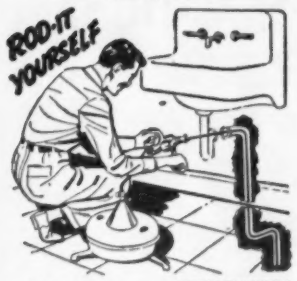
▲ For more details circle NED-18 C7 on enclosed inquiry slip ▲

For more information, write:
LOUISVILLE LADDER COMPANY
Dept. N-3, 1101 West Oak St., Louisville 10, Ky.

▲ For more details circle NED-16 C7 on enclosed inquiry slip ▲

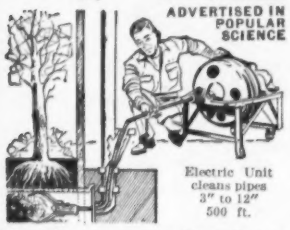
YOU MUST READ THIS!

Before you pay out another costly plumbing bill



CHICAGO—Mar. 1st—Factories, Offices, Machine Shops including Home Owners are constantly having trouble with clogged-up pipes which proves expensive in Costly Plumbing Bills—

But now—here is a **new Rodding Tool** designed to clean out the most stubborn drain & sewer stoppages. Not just an ordinary rod, but a patented unit guaranteed to make every bend up to 100 ft. A new discovery in Swedish music wire gives the rod 100% more flexibility than any other sewer cable. Yet anyone can operate this rod which is whirled down the drain in a few minutes.



TOILETS, URINALS, SINKS, and FLOOR DRAINS clogged with paper, grease, rags, soap, metal chips, and sand can be cleared **saving the owner the Rodding Tools price, the first time it is used.** Cutter blades can be attached for removing roots. This new unit can be used on any ½" to 6 inch waste pipe including Septic Lines, Sewers, Laundry Tubs, Bathtubs, and avoids Flooded Basements. Obstructions give away immediately when struck by this new type of Sewer Machine.

We offer this new Rodding Tool on a 30-Day Free Trial to prove its value. **BUT MOST IMPORTANT IS THIS**—What is this Tool worth to your Building, Factory or in your own Home in Costly Plumbing Bills Saved! FREE BOOKLET lists latest Discoveries in Hand & Electric Units, Root Cutters, Water Impact Guns—For your own good—Fill coupon now. **No agent will call,** or write Postcard (Chgo. phone KIldare 5-1702)

MILLER SEWER ROD, Dept. N.D., 4642 N. Central Ave., Chicago 30, Ill.
Please send FREE BOOKLET on Rodding. I am not obligated.

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FIRM .....
STREET ..... CITY ..... STATE .....

▲ For more details circle **NED-19 C7** on enclosed inquiry slip ▲

SPRAY CENTRIFUGALLY

with this **NEW** self-contained portable electric spray gun

SAVES PAINT—SAVES LABOR

★

Handles any fluid—paint lubricant, protective coating, etc.

Weighs only 3 pounds.

3-speed Westinghouse motor spins rotor at 7000, 10,000 or 15,000 rpm—fingertip control.

Spray pattern adjustable in width from ¼ to 15 in.

Easily cleaned; no nozzles to plug up.

Minimum of overspray, fogging and splatter.

Plugs into any 110-v 60 cycle AC outlet.

Price: $44.95

Exclusive Territories Available to Established Industrial Representatives.

WRITE TODAY!

A. A. SMITH CO.

P. O. BOX 3525 CLEVELAND 18, OHIO

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MEAD IMPACT MILLS SINCE 1877

PULVERIZE GRINDABLE AND UNGRINDABLE MATERIALS

FAST CONTINUOUS PRODUCTION
QUIET
LOW MAINTENANCE
5 VERSATILE MODELS
WIDE RANGE of MATERIAL & PARTICLE SIZES
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COMPLETE ENGINEERING AND INSTALLATION AVAILABLE

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DETROIT 15, MICHIGAN

CONTRACT PULVERIZING AVAILABLE

▲ For more details circle **NED-21 C7** on enclosed inquiry slip ▲

ELAPSED TIME RECORDER

measures machine use time only

Only loaded time of motor-driven machines or circuits is recorded in hours or minutes by this Load Log elapsed time recorder. Less than 4 in. square by 2⅝ in. deep, and projection mounted, meter is designed for motors or electrical apparatus which run constantly, and are engaged by clutch to a load, such as an IBM machine, machine tool or processing machine. Meter can be supplied in digits 999.9 to 99999.9 in hours or minutes, for 115 v up and for up to 25 amp. Made by **Capeway Instrument Corp.,** N. Bedford St., East Bridgewater, Mass.

▲ For more details circle **NED-22 C7** on enclosed inquiry slip ▲

CHECK VALVE

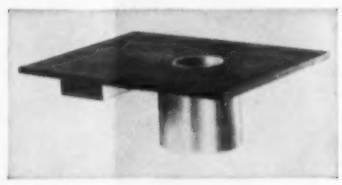
aluminum unit for 3000-psi service

Rated flow capacity of this ½-in. aluminum alloy check valve is 6 gpm. Developed for 3000-psi service, it is approved as MS-28890-8 and has an ambient temperature range from −65 to 160° F. Wider ranges are available on special order. Other aluminum alloy sizes on which approval is pending are ⅝, ¾ and 1 in. They also bear a 3000-psi rating. Made by **Aircraft Products Co.,** Tactair Valve Div., 311 Church Rd., Bridgeport, Pa.

▲ For more details circle **NED-23 C7** on enclosed inquiry slip ▲

PROXIMITY PICKUP

hollow coil counts metal parts

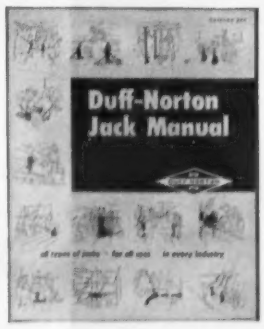


Screws, nuts, washers, bolts and other small metal parts can be counted by the model 4920-AN hollow coil proximity pickup, designed for use with proximity transducer systems. Unit has a hollow phenolic table around which the sensing coil is wound. As a high frequency carrier- operated transducer it senses aluminum, brass, copper, iron and steel. Coil, used as part of a chute or tube carrying metal parts, causes the control unit to generate direct current voltages, operate relays, or actuate electromechanical or electronic counters and automatic machinery. Counting rates in excess or 60,000 per minute are possible with electronic counters. Pickup is offered in 15 sizes from ¼ to over 3 in. diameter. Made by **Electro Products Laboratories, Inc.,** 4504 Ravenswood Ave., Chicago 40, Ill.

▲ For more details circle **NED-24 C7** on enclosed inquiry slip ▲

FREE MANUAL

describes over 300 Duff-Norton Jacks



Over 300 jacks are completely described in a 40-page brochure which will be sent free upon request. Rachet jacks, screw jacks, hydraulic jacks, and many special types are shown. In addition, a great deal of information is given on basic jack design principles, proper methods of selecting jacks for any job, proper care for jacks, and how to make the most efficient use of jacks. This most complete jacking manual is published by the world's largest and oldest manufacturer of lifting jacks. For your copy, write Duff-Norton Company, P. O. Box 1889, Pittsburgh 30, Pa., requesting Catalog 204-N.

▲ For more details circle **NED-25 C7** on enclosed inquiry slip ▲

LOWER COST, SIMPLER, FASTER ASSEMBLY with

PRINTED CIRCUITS

for Radios, TV, Instruments, Military Equipment, Panels, Controls, Gages and Switch Plates

Your Benefits: Shorter assembly lines, Reduced assembly time, Exact circuit reproducibility, Improved reliability, Easier servicing, Miniaturization, Lower inspection costs, Product improvement.

Ask for full information! Offices in principal cities.

Photocircuits CORPORATION

Dept. NED3, GLEN COVE, NEW YORK

World's Largest Producer of "Exclusively Printed Circuits."

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✓ EXPERIENCE
✓ STAFF
✓ CAPACITY

For nearly half a century S. B. Whistler & Sons, Inc. have been manufacturing custom dies for the top names in industry. With our large staff of experienced engineers and skilled tool and die makers, supported by extensive mechanical facilities, we offer a dependable die making service to any manufacturer whose product calls for the working of sheet metals.

You are invited to send us your specifications and drawings for cost estimates and delivery schedule. See for yourself how Whistler dies are stepping up production and cutting costs in plants coast to coast.

S. B. WHISTLER & SONS, INC.
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ADJUSTABLE, MAGNETIC and CUSTOM DIES FOR ALL INDUSTRY
Direct Factory Representatives Located in Principal Industrial Areas

Our 40th Year Manufacturing Dies

▲ For more details circle **NED-27 C7** on enclosed inquiry slip ▲

Hold Welding Jobs In Any Position RIGIDLY! NO HANDS!

SAVE HOURS of time and labor with *one* tool which clamps work rigidly—in any position—for soldering, welding, assembling, regulating, painting! Simply bolt Grayson Universal Positioner onto work bench, or clamp in vise. Four 360-degree ball joints adjust arms and jaws to any position. Then the two vise-grip clamps lock onto work—rigidly—freeing worker's hands. Eliminates bridge-up . . . a helper . . . involuntary movement of work. Lifetime construction of heavy steel; Vise-Grip clamps equipped with special jaws. Guaranteed!

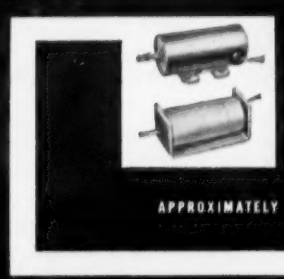
ORDER C.O.D., OR SEND CHECK AND WE'LL PAY POSTAGE

GRAYSON TOOL CO. Dept. NE-3, Hastings, Nebr.

▲ For more details circle NED-28 C7 on enclosed inquiry slip ▲

MIGHTY MIDGETS!

CANNON MINIATURE D. C. SOLENOIDS



APPROXIMATELY 1½" x ¾"

POWERFUL! RELIABLE! MANY USES! LOW COST!

Here's YOUR answer to small traction problems.
May be used to operate keyboards, light springs, control board signal flags, and door latches. Conventional design.
Wide range of d. c. voltages. Self-lubricating Nylon bobbin. Side leads.
Design variations available to meet YOUR specific problems.
Write TODAY for full information!

CANNON PLUGS

Please Refer to Dept. 113

CANNON ELECTRIC COMPANY, 3209 Humboldt St., Los Angeles, California
Factories in Los Angeles; East Haven; Toronto, Canada; London, England. Representatives and distributors in all principal cities.

▲ For more details circle NED-29 C7 on enclosed inquiry slip ▲

Clean, uniform, exact heat to match the size and shape of your production equipment

CHROMALOX Electric Strip Heaters

Quickly and easily bolt or clamp Chromalox Electric Strip Heaters to your platens, dies, kettles, tanks, pipes, ovens, air ducts, for the many advantages obtained only with electric heat.

Lengths 4" to 96" Widths ¼" to 2½"
Cross-section curving or lengthwise bending.
Ring Diameters 2½" to 11"
115, 208, 230, 480 Volts 35 to 5,000 Watts
Sheath Materials: rust resisting iron, high temperature chrome steel, Monel
Choice of convenient terminal placements.

FREE BULLETIN—Call your Chromalox Representative . . . or write today for Bulletin F1566.

Edwin L. Wiegand Company
7509 Thomas Boulevard, Pittsburgh 8, Pa. C-2108

See other ad on page 71

▲ For more details circle NED-30 C7 on enclosed inquiry slip ▲

NEW EQUIPMENT DIGEST

BPA NBP

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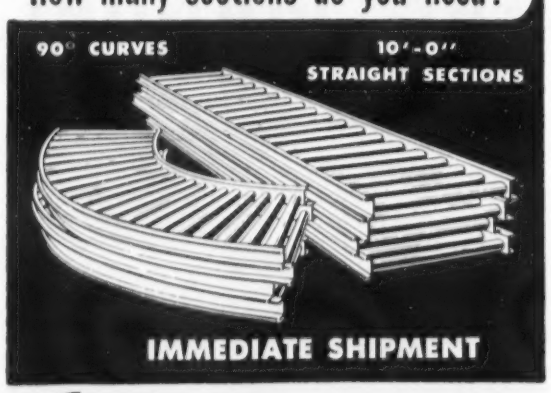
HIGH-LOAD WHEELS in 3 to 10-in. diameters

Long tire wear, low power consumption and minimum down time are advantages realized with use of these Disowheels designed for materials handling

equipment. Disogrin tire stands up under stationary heavy loads for extended periods without developing appreciable flats. It will not become "chewed" and torn when used under heavy loads, or over rough floors. Load carrying capacity of the 4 x 3 in. wheel is up to 2000 lb. Tires are securely bonded to wheels to prevent slippage. Wheels also have outstanding oil, ozone and sunlight resistance and good floor protective qualities. Diameters from 3 to 10 in. are available. Made by **Greer Industries, Inc.**, PR Dept., New York International Airport, Jamaica 30, N. Y.

▲ For more details circle NED-31 C7 on enclosed inquiry slip ▲

How many sections do you need?



Stock ROLLER CONVEYOR

Offered in several sizes for average duty conveying. Roller spacing 4" or 6" centers. Roller lengths of 12", 16" and 20". Can be used with rolls set high, or inverted so that rolls set low and frame forms a guard rail. Both stationary and portable supports available. Write for literature.

LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

Logan Conveyors

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NEW . . . COMPACT . . .

Energy* Cartridge

For high loads at minimum deflection

The Energy Cartridge* fills the need for a spring with constant load deflection characteristics acting in compression. It is a one-piece unit of preassembled Belleville washers . . . stacked in varying sequence according to load and space requirement. For complete information about this versatile spring write for booklet "Energy Cartridge."

*Reg. U. S. Pat. Off.

ASSOCIATED SPRING CORPORATION

General Offices: **Bristol, Connecticut**

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ACES BACK TO BACK

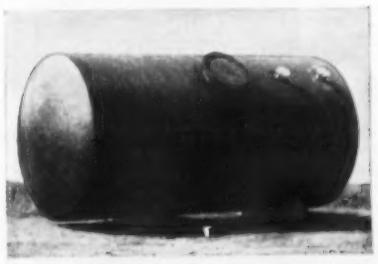
the resiliency of rubber...
...the strength of steel

An Unbeatable Combination against Corrosion, Abrasion and Erosion in Industry.

Rubber and Steel, wedded by experts with an adhesion of over 500 psi, offers a service and economy never dreamed of in the process industry 10 years ago.

Whether your needs involve conduction or storage, corrosive fluids from acids to alkalies, abrasive solids from finest powder to coarsest crystals, under vacuum or pressure conditions, find out what rubber and steel can do for you.

La Favorite offers 40 years experience in "growing up with rubber" as a basis for help and advice.



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ADDRESS _____

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Circle the Numbers Below corresponding to items on which you want additional information. Your request will be sent promptly to the manufacturer. Please fill in the coupon completely. We'll pay the postage.

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2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202
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NEW EQUIPMENT DIGEST

A PENTON PUBLICATION

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Principal Products Manufactured: _____

Approximate Number of Employees in Plant: _____

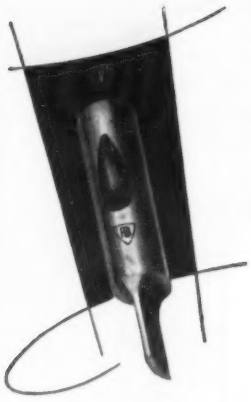
Check Invested Capital Rating of Your Company

- ☐ Over $1,000,000
- ☐ $500,000 to $1,000,000
- ☐ $200,000 to $500,000
- ☐ $75,000 to $200,000
- ☐ Under $75,000

USE THIS SLIP FOR MARCH, 1957 ISSUE ONLY

C-7

WHY R-B PUNCHES
are Easier to Use



Just a push, a twist, and "click" your R-B punch or die button is accurately ALIGNED and LOCKED in place. The R-B ball lock prevents radial or vertical movement of the punch or die button in the retainer—no additional keying is required.

R-B punches and die buttons are just as easy to remove—simply insert tanged tool in retainer hole to release ball lock. Standardized and completely interchangeable in any shape or size, these easy to use punches and die buttons save your time and energy.

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
Dept. 74 • 26482 Capitol Ave. • Detroit 39, Mich.

Also Produced in OTHER ALLIED PLANTS
SPECIAL COLD FORGED PARTS • STANDARD CAP SCREWS
PRECISION GROUND PARTS • SHEET METAL DIES MADE OF FERROUS ALLOYS, ZINC ALLOYS OR PLASTICS

For more details circle NED-35 C7 on enclosed inquiry slip

THERE'S A TOTELINE
BOX OR TRAY OF MOLDED FIBERGLASS TO CARRY YOUR SMALL PARTS

- Light but strong
- Constant tare
- Clean easily
- No maintenance
- Don't absorb heat
- No sharp edges, corners
- Most boxes nest, stack
- Chemically resistant
- Wire reinforced edges
- Available in colors

WRITE FOR BULLETINS AND NAME OF NEAREST TOTELINE REPRESENTATIVE IN U.S. AND CANADA

MOLDED FIBER GLASS TRAY CO., LINESVILLE, PA.
World's largest producer of resin-reinforced fiberglass trays and tote boxes

For more details circle NED-36 C7 on enclosed inquiry slip

IT CAN SAVE YOU $$$$$$$

— by Slashing Metal-Cutting Costs! . . . .
BUT IT'S *FREE!*
Better Write for the
HKP PORTER CUTTER-*Catalog*

In manufacturing plants everywhere these powerful, efficient cutters are saving money in production, maintenance and materials handling operations. Manufacturers are finding out that a PORTER METAL CUTTER is capable of exerting 20,000 pounds of cutting pressure — sufficient to cut ⅝" diameter steel rod, at a labor cost of 1/14th of a cent, versus 7 cents cost with other tools. Your jobs may be tough, but, perhaps the PORTER CUTTER catalog can come up with a tool that's tougher — and the answer to your problem. At any rate, it will cost you nothing to

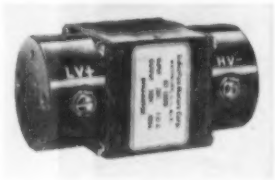
WRITE FOR THE PORTER CATALOG — TODAY!
It shows 108 different metal cutters — that cover just about every cutting job we know of, including BOLTS, RODS, SCREWS, RIVETS, SOFT, MEDIUM AND HARD METALS, WIRE, STEEL STRAPPING, CABLE, CHAIN and other metals.

Ask your Industrial Distributor or write

H. K. PORTER, Inc. Somerville 43, Mass.

For more details circle NED-37 C7 on enclosed inquiry slip

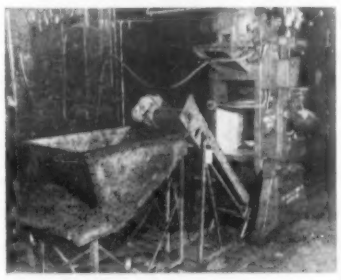
DYNAMOTOR
delivers up to 25 watt output



Usable in telemetering installations and in guided missiles, model BD 1509D dynamotor has continuous power output of 10 w, ranging up to 25 w depending upon cooling and duty cycle. Brush life is 100 hours at 50,000 ft, and it operates in an ambient temperature range from −40 to 71° C. It is shock and vibration resistant. Made by **Induction Motors Corp.**, Dept. NED, 570 Main St., Westbury, L. I., N. Y.

For more details circle NED-38 C7 on enclosed inquiry slip

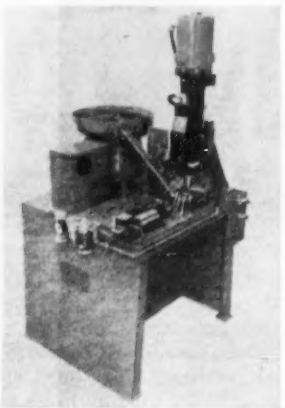
PRESS TRANSFER CONVEYOR
is portable power metal belt unit



All types of small stampings and metal parts are economically transferred from presses or other production machines by this portable power metal belt conveyor. Belt widths range up to 30 in., and lengths can be made to suit installation needs. Discharge height and angle are readily adjusted, and straight or bent models are offered. Positive-drive spike pulley assures continuous handling of parts, regardless of oily condition. Motor drive, ranging in capacity from ⅓ to 1 hp, can be mounted above or below conveyor bed. Made by **R. T. Sheehan Co.**, 8070 N. Territorial Rd., Plymouth, Mich.

For more details circle NED-39 C7 on enclosed inquiry slip

AUTOMATIC TAPPING MACHINE
will tap 1500 pieces per hour



A vertical tapping unit, a vibratory feeder, gravity track, an escapement, work feeder and an ejector comprise this automatic tapping machine for small parts. The work feeder positions and clamps the part securely in the tapping fixture, while the ejector mechanism discharges parts into a chute. Production of machine is over 1500 pieces per hour. Tapper can be modified for automatic drilling or assembling. Made by **Automation Development Corp.**, Dept. ND, 135 Reynolds Rd., Mentor, O.

For more details circle NED-40 C7 on enclosed inquiry slip

Aftercooler and Cyclone Separator designed for cleaner, dryer compressed air

The Adams Aftercooler and Cyclone Separator are designed to efficiently condense and remove water from compressed air and process gas. Condensed moisture and entrained dirt and oil are subsequently removed in a cyclone type separator. This unit is scientifically designed for maximum removal efficiency over a wide range of flow rates.

For normal use, units are available to cool gases to within 10° F of the temperature of the cooling water. Specially designed units are available to permit a 2° F approach to cooling water temperature, for application where low moisture content is critical.

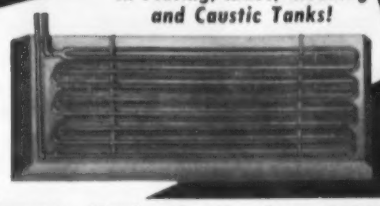
Adams Aftercoolers and Separators are available from stock to handle 20 - 40,000 cfm with 10° cooling and 25 - 19,200 cfm where it is necessary to cool within 2° F of the cooling water. Special units can be supplied to suit an unlimited range of requirements. In all cases, a pressure drop of ½ psi is assumed at a maximum working pressure of 150 psi.

This wide range of sizes enables the cost-cutting application of Adams Aftercoolers and Separators in virtually all industrial application. For further information on how R. P. Adams' units will solve your compressed air problems and save you money, write today for Bulletin 711, R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *ADVT*

For more details circle NED-41 C7 on enclosed inquiry slip

FOR MAXIMUM "Hi-Speed" EFFICIENT SOLUTION HEATING!

In Plating, Rinse, Cleaning and Caustic Tanks!



REMPE "Hi-Therm" GRIDS

- High concentration and unusual amount of heat transfer surface makes them far superior to plate coils.
- Staggered arrangement of tubes gives high conduction and convection factor for fast starts and accelerated fluid motion.
- Maximum prime heat transfer surface in a limited space — cross section width only 2¾".
- Made from wrought steel pipe, stainless steel, copper, aluminum, nickel, brass or other metals.

WRITE FOR DETAILS

HEAT TRANSFER EQUIPMENT REMPE CO. Founded 1890

REMPE COMPANY
338 N. Sacramento Blvd., Chicago 12, Ill.

For more details circle NED-42 C7 on enclosed inquiry slip

Combines fine engineering *and* economy!

. . . new FOXBORO Pressure Transmitter

- Scale easily readable at 20 ft.
- Standard time-proved component parts
- Simple calibration "on location"
- Compact integral instrument

The new Foxboro M/44 Pneumatic Pressure Transmitter gives you a unique combination of fine engineering and economy. It's a compact, integral instrument . . . no attachments or "makeshifts." Utilizing standard, performance-proved Foxboro parts throughout, it assures you not only top performance, but easier stocking and servicing as well. "Convenience-design" makes calibration in the field a cinch. Drawn-steel, weatherproof, air-purged case with tough polyester plastic cover. A neat, high-efficiency, low-cost instrument for centralized operation or control. All standard ranges. Write for full details. **The Foxboro Company, 663 Neponset Ave., Foxboro, Mass.**

FOXBORO REG. U. S. PAT. OFF. INSTRUMENTATION

For more details circle NED-43 C7 on enclosed inquiry slip

- Double ball bearing swivels
- Top quality swivel lubrication
- Heavy gauge steel forks and races
- High efficiency treads
- Renewable rubber tired wheels
- Superior quality bearing balls

Write for catalog illustrating complete line of J & J casters and wheels.

In Canada: Jarvis & Jarvis of Canada, 1744 William St., Montreal, Que.

For more details circle NED-44 C7 on enclosed inquiry slip

MOVE LOADS *Faster, Easier and Safer* with UNIVERSAL LIFT TRUCK ATTACHMENTS

A Universal carton clamp is stacking small cartons, quickly and easily, without using a pallet. Clamp eliminates cost of buying and maintaining pallets and increases storage space.

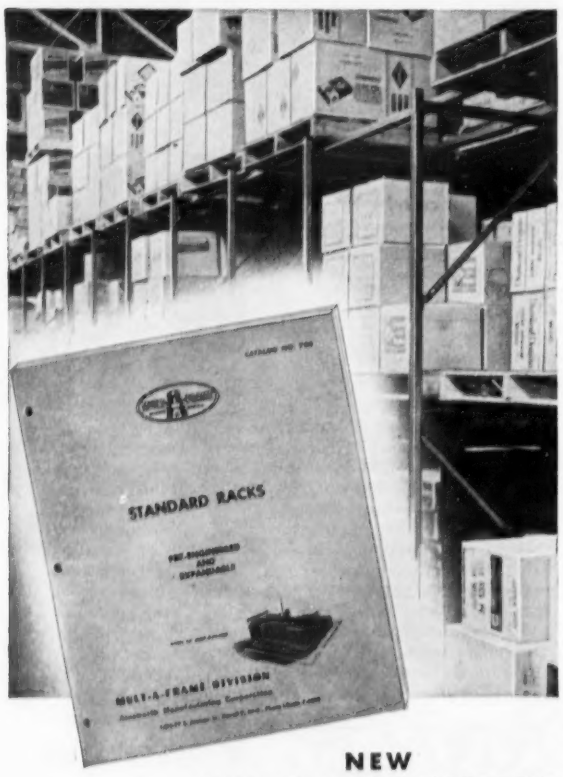
You too, can cut costs with Universal lift truck attachments engineered to your specific material handling requirements.

With the most complete line of attachments . . . Universal can solve your most unusual handling problem. Units fit any lift truck.

Your lift truck representative will gladly work with you in selecting the Universal attachment to suit your job.

Universal CLAMP CO.
ST. LOUIS 14, MO.

For more details circle NED-45 C7 on enclosed inquiry slip



NEW MULT-A-RACK CATALOG

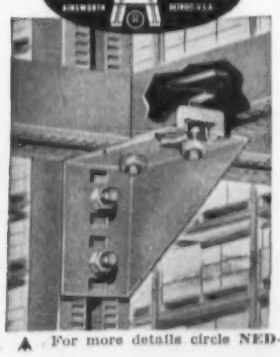
SOLVES RACK PROBLEMS AT A GLANCE!

Now 1800 *standard* Mult-A-Rack designs combine custom built versatility with production line savings. Here's all you do: just glance at the easy to read Mult-A-Rack catalog chart; identify your pallet type; check your load requirement; select rack size and order by number.

No skilled labor is needed to erect Mult-A-Racks. The only tool needed is a hand wrench. Rack areas change from time to time? Takes only a few minutes to disassemble and rebuild Mult-A-Racks. All parts are completely re-usable.

Like to learn more about how pre-engineered Mult-A-Racks save you time and money? Then send today for your free copy of the new Mult-A-Rack catalog — "Pre-engineered and Expandable Racks" — showing 1800 standard different rack designs.

MULT-A-FRAME



See the secret of Mult-A-Frame strength: Exclusive serrated edges that clamp together to prevent jackknifing. Note too the unique Mult-A-Frame spring T-bolt which holds fittings in place until ready for wrench tightening.

MULT-A-FRAME DIVISION
Ainsworth Manufacturing Corporation
1471 East Atwater St., Detroit 7, Mich.

For more details circle NED-46 C7 on enclosed inquiry slip

SQUEEZE BOTTLE MARKER
holds ¾-oz ink supply

This felt point marker utilizes a plastic squeeze bottle which holds ¾-oz of water color ink. The Squeezo marker is a nonrefillable, throw-away product and is available in eight colors which can be washed off hands with soap and water. Ink is for porous surface marking and will not "strike through" the cheapest grade of newsprint. Price is 79 cents. Made by **Marsh Co.**, 23 Marsh Bldg., Belleville, Ill.

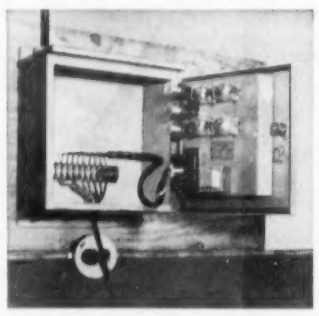
For more details circle NED-47 C7 on enclosed inquiry slip

SOLENOID VALVE
normally open, full port type

Automatic control of water, brine, solvents, gas, air and vacuum is possible with the type AR normally open solenoid valve. Full port capacity model features tight shut-off when solenoid is energized. It is cast of high pressure valve bronze in a globe pattern and is available in ½ to 3-in. sizes with ratings to 300 psi. The single-seat valve has a removable operating assembly which leaves line or electrical feed undisturbed. Made by **Magnatrol Valve Corp.**, 73 Fifth Ave., Hawthorne 8, N. J.

For more details circle NED-48 C7 on enclosed inquiry slip

PRESS UNLOADER CONTROL
speeds die changeovers, adjustments



Usable on new or existing installations of Sahlin Iron Hand automatic unloading machines, this electronic remote control permits adjustment of press unloaders by merely turning calibrated dials. Nine precision adjustments are possible for the main cylinder speed, delay between jaw gripping panel and lifting action, jaw release point, arm stroke and overtravel, arm return-stroke delay, independent arm or jaw operation, and Iron Hand cycling independent of the press. A "memory" chart permits recording dial settings for any specific job. This speeds changeovers for any press operation. Made by **Sahlin Engineering Co.**, Dept. NED, Box 289, Birmingham, Mich.

For more details circle NED-49 C7 on enclosed inquiry slip

Protect personnel during welding operations

IPCO WELDING CURTAINS

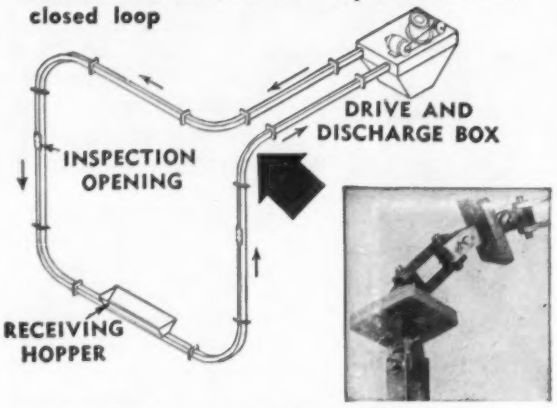
Confines the welding operation to a given area; protects other workers and passers-by from harmful rays, flying chips and scale. Made of flameproofed canvas (Underwriter's Approved Treatment) or asbestos, complete with eyelets for suspending on rod or pipe support.

Write for Bulletin No. 43

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

For more details circle NED-50 C7 on enclosed inquiry slip

"Tube-Veyor" (Trademark Pat. Pend.)
CHAIN FLIGHT CONVEYOR
handles bulk material in square tube in closed loop

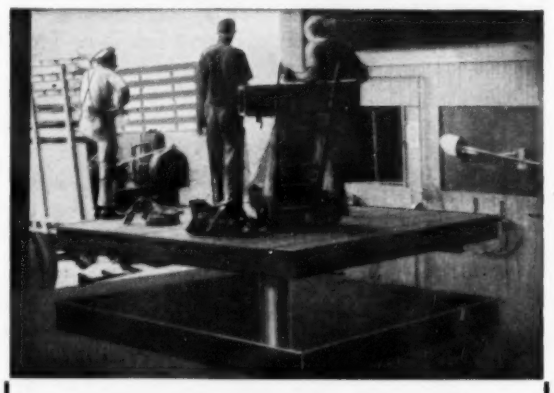


Flight-equipped chain is flexible in TWO directions so the tube in which it travels can be curved horizontally or vertically. The tube forms a closed loop as shown. Materials handled can be chips, flour, salt, sawdust, grain, coal, starch. Sizes are 3, 4 and 6 in. in cross section. Capacity is .45 to 2 cfm. at 10 fpm. speed. Engineered to your specifications.

Ask for Catalog #500
Dept. N

PRAB CONVEYORS, INC.
30121 GROESBECK HIGHWAY ROSEVILLE (Detroit), MICH.

For more details circle NED-51 C7 on enclosed inquiry slip



Comwel Platform Lifts

Speed Receiving and Delivery. Provide greater safety in handling heavy machinery, crates, barrels, castings, etc. Loads quickly raised from floor level to truck or dock height. Retracting safety skirt optional.

The COMWEL PLATFORM LIFT pays for itself many times over in saving time and manpower. Standard Model has capacity up to 10 tons. Other capacities available. Write or wire.

COMWEL COMPANY
2899 Norton Ave. Lynwood, Calif.

For more details circle NED-52 C7 on enclosed inquiry slip

REDUCE TAP COSTS UP TO 75%

with the *Rocket*

TAP SHARPENER

Push button control — no cams needed. 50 series for 2, 3, 4 flutes collet capacity to 1-1/16". 60 series for 4, 5, 6 flutes collet capacity to 2-1/4". Special orders for additional flute capacities.

Use on any tool and cutter grinder or small surface grinder . . . Guarantees precision sharpening through accurate grinding.

a low cost fixture that sharpens dull taps
- quickly
- economically
- accurately

Write for demonstration and literature

ROCKFORD DIE & TOOL WORKS, INC.
1820 Seventeenth Ave. Rockford, Ill.

For more details circle NED-53 C7 on enclosed inquiry slip

the NEW SPEEDWAY cut-off tool

- eliminates overhang problems
- increases cutting speeds
- saves in labor, material, power, tool and spindle wear

This new, patented tool provides savings in cutting time, blade replacement and power. The unique construction eliminates the overhang problem by supporting the cutting edge by tension vertically. This permits a much thinner blade in relation to depth of cut. For example, for cuts up to 4¼", the blade is .095" thick. Much less heat is created. Blades and holders are available for cuts up to 4¼". Sharpening is accomplished easily with one or two passes over any tool grinding wheel. The tool is especially stable on interrupted cuts.

Blades available in .0625" and .095"

For complete details, write Dept. NE-3

CRITERION MACHINE WORKS
765 West 16th Street
Costa Mesa, Calif.

For more details circle NED-54 C7 on enclosed inquiry slip

ROTARY PAINT SPRAYER
employs a centrifugal principle

Centrifugal action instead of air pressure is used to propel paint from the Rogers Rotary paint gun. Rotor blades powered by a Westinghouse motor spin at 5000, 10,000 or 15,000 rpm, drawing paint up from can through strainer-free stem and whirling it out through a slot. Spread range of paint can be adjusted from ¼-in. to 15 in. Only about 5 per cent of paint is lost in overspray. Gun handles any type paint in its 1-qt twist-on can. It is easily cleaned by replacing paint with appropriate solvent. Paint gun sells for $44.95 and is distributed by **A. A. Smith Co.**, Box 3525, Cleveland 18, O.

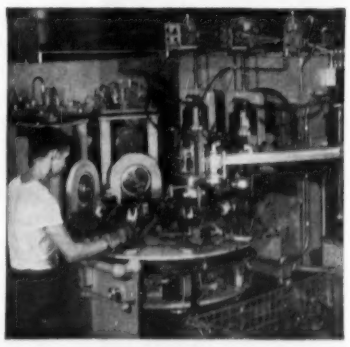
For more details circle NED-57 C7 on enclosed inquiry slip

PLASTIC WELDER
normally has 320-w heat element

Molded plastic handle of the model P plastic welder provides a firm, natural grip and protection from heat. Welder is normally equipped with a 320-w heating element, but is available with interchangeable 180, 240 and 600-w elements. Range of wattages permits welding of various thermo plastics from thin polyethylene to thick polyvinyl chloride. The 14-oz unit has a 10-ft air hose. Made by **Seelye Craftsmen**, 984 Central Ave., Minneapolis, Minn.

For more details circle NED-58 C7 on enclosed inquiry slip

AUTOMATIC HARDNESS TESTER
checks up to 1000 parts per hour

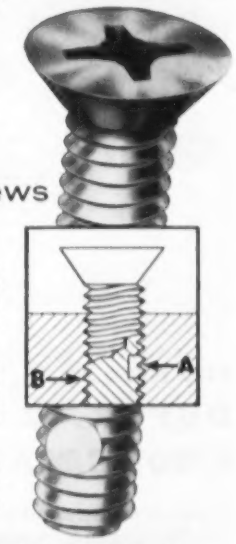


Automatic "go-no go" Brinell hardness tester correctly accepts or rejects parts at rates up to 1000 per hour. The revolving three-station tester automatically grinds a smooth test surface, applies a 3000 kg load, measures depth of impression and accepts or rejects the parts. Operator merely places parts in holder before they are rotated to first station. Made by **Tinius Olsen Testing Machine Co.**, 5874 Easton Rd., Willow Grove, Pa.

For more details circle NED-59 C7 on enclosed inquiry slip

WON'T WORK LOOSE!

Continental HOLTITE NYLOK® Self-locking Screws



Resilient nylon plug (A) sets up a lateral thrust, wedges mating threads together (B). Locking is positive — seated or unseated. Screw cannot work loose.

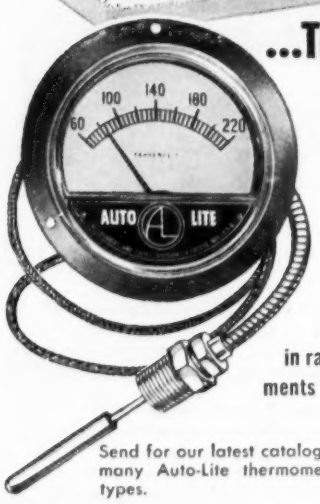
The simplest self-locking fasteners, NYLOK Screws are easy to drive . . . can be removed and replaced . . . act as seal for gases, liquids.

NYLOK may be the answer to your assembly problem. For complete details write Dept. ND.

CONTINENTAL
SCREW COMPANY, NEW BEDFORD, MASS.
HOLTITE FASTENERS
PHILLIPS AND SLOTTED HEAD TAPPING SCREWS, WOOD SCREWS, MACHINE SCREWS, SEMS, BOLTS, NUTS, STANDARD OR SPECIAL . . . FOR ANY ASSEMBLY

For more details circle NED-60 C7 on enclosed inquiry slip

AUTO-LITE ...TEMPERATURE INDICATION



Original equipment manufacturers may choose from a complete line of Auto-Lite dial thermometer types, in ranges to meet the requirements of specific applications.

Send for our latest catalog describing the many Auto-Lite thermometer styles and types.

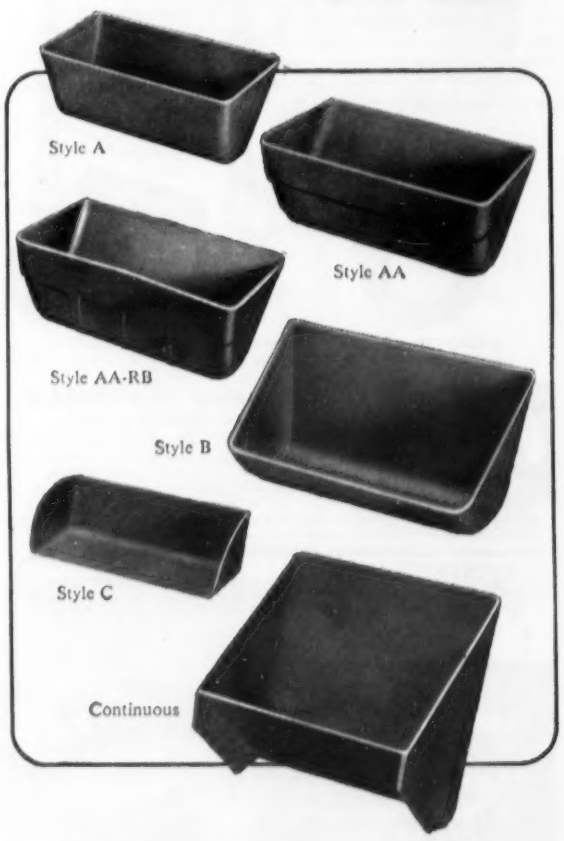
THE ELECTRIC AUTO-LITE COMPANY
Instrument and Gauge Division
Toledo 1, Ohio
New York • Chicago • Sarnia, Ontario

TEMPERATURE INDICATORS & RECORDERS

For more details circle NED-55 C7 on enclosed inquiry slip

LINK-BELT cast elevator buckets

for . . . a variety of materials
. . . a wide range of capacities



Whether you handle dry or sticky . . . pulverized or coarse . . . light or heavy materials—Link-Belt can furnish the type and size of cast elevator buckets to meet your specific operating requirements. Design features include reinforced corners for extra strength—smooth, seamless surfaces for quick, easy pickup and discharge. What's more, they're available in malleable iron and Promal. For facts, see your nearby Link-Belt office or authorized stock-carrying distributor. Ask for Book 2465.

LINK-BELT

CAST ELEVATOR BUCKETS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,482

For more details circle NED-61 C7 on enclosed inquiry slip

1 HOUR to bend 1200 Pieces of WIRE, STRIP METAL or TUBING with CAR-ANTH PNEUMATIC POWER BENDER

at a fraction of the cost of Automatic Equipment

NOTE THESE FEATURES: Timken bearing equipped • Protective hood • Powerful—air cylinder • Pressure Ratio 10 to 1 • Interchangeable pin • Adjustable Stroke Stop—Any degree of bend up to a complete loop • Bench operated with foot pedal • Mounted on heavy steel base • Can make up to 1200 bends per hour • On small diameter wire bend 2 or more at a time • Operates entirely by air pressure • Experienced operators not necessary • Set up in 5 minutes • Bend wire and strip metal up to 2" radius • maximum ⅜" in bright basic wire • Can be adapted to tube forming • All strokes the same • Complete, ready to operate by merely attaching to air line. Valve and 10 ft. of hose furnished.

Send pieces of material and drawing or sketch of job you want done.

Write for more information of what it will do. CAR-ANTH Mfg. & Supply Co. 411 Eichelberger St. Louis 11, Mo.

For more details circle NED-56 C7 on enclosed inquiry slip

YOU NEED A . . .
DUPOR WATER COOLED
SMOKE MASK

A complete combination of respirator and goggles that provides lung and eye protection for painters, foundrymen, smelters, oil refiners, chemists, firemen, etc. The respirator is water-conditioned with all incoming air passing through cool, clear water. The goggles are the famous "Nod & Shake" fog-proof and gas-tight type. No finer protection, anywhere! Order sample today, $5.00 postpaid.

H. S. COVER, P. O. Box 2508
South Bend 14, Indiana

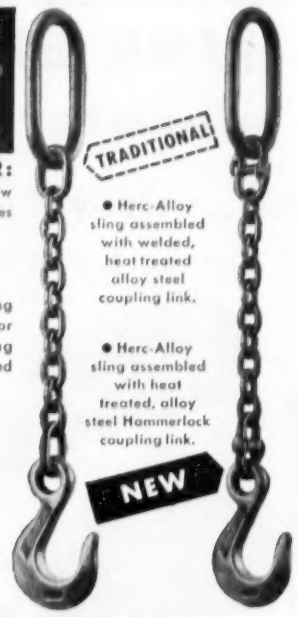
"Respirators for Industry since 1894"

For more details circle NED-68 C7 on enclosed inquiry slip

HERC-ALLOY®
. . . the original alloy steel chain

TO SERVE YOU BETTER:
Herc-Alloy chain assemblies can now be ordered with either of two types of coupling links.

Hammerlok®
the "do-it-yourself" reusable coupling link that enables you to assemble or rebuild your own Herc-Alloy sling chains with all components furnished by your local distributor.



• Herc-Alloy sling assembled with welded, heat treated alloy steel coupling link.

• Herc-Alloy sling assembled with heat treated, alloy steel Hammerlock coupling link.

CALL YOUR CM CHAIN DISTRIBUTOR or write for helpful literature on alloy chain assembly, care, use and inspection.

CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
Regional Offices:
NEW YORK • CHICAGO • CLEVELAND
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

For more details circle NED-69 C7 on enclosed inquiry slip

CURTIS TERMINAL BLOCKS for EVERY PURPOSE
in Factory Assembled and Kit Form
SEE THEM BOOTH 2827
Radio Engineering Show
New York Coliseum
New York City
March 18-21

CURTIS DEVELOPMENT & MFG. CO.
3206 North 33rd Street, Milwaukee 16, Wisconsin

For more details circle NED-70 C7 on enclosed inquiry slip

LIGHTWEIGHT IMPACT TOOL
delivers 10,000 blows per minute

Only 5¾ in. long and weighing 9 oz, the Lynco 34 automatic air impact tool delivers up to 10,000 blows per minute. Tool has a ¾-in. bore and ½-in. stroke and operates automatically when applied to work, shutting off when withdrawn. Uses include scaling, etching, light riveting, center punching and driving screws in plastics and similar materials. Tool blank is supplied for individual work adaptation. Made by **Burklyn Co.**, Dept. NED, 3429 Glendale Blvd., Los Angeles 39, Calif.

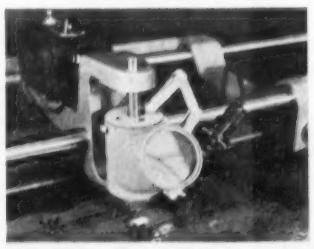
For more details circle NED-71 C7 on enclosed inquiry slip

HAND WHEELS
new additions augment the line

Additions to line of straight and angular cast aluminum hand wheels include plain or finished types, with or without lug for revolving handle. Straight wheels are offered in 6, 8 10 and 12-in. diameters, while angular wheels are made in 4, 5, 6, 8, 10, 12 and 14-in. diameters. New 4 and 5-in. wheels are solid disk type, without spokes. Wheels from 6 to 10 in. have four spokes, while 14 in. wheels have five spokes. Made by **Jergens Tool Specialty Co.**, Dept. NED, 712 E. 163rd St., Cleveland 10, O.

For more details circle NED-72 C7 on enclosed inquiry slip

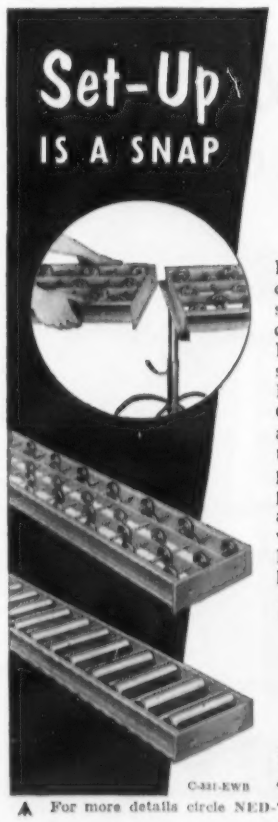
OPTICAL PUNCHING GUIDE
centering scope used on punch press



Mounted on the stylus bracket of the Wales Fabricator - Duplicator punching press, this Dupl - O - Scope facilitates preparation of master templates for printed circuits. It enables the operator to sight on a master circuit so that the machine will punch a corresponding hole in the master template when the foot control is tripped. This template is then used for production punching of panels. Scope is precision cast with a fixed focus, 4-power lens and prism. Standard multi-ring, single cross-hair reticule permits positive centering for punching round and shaped holes. External light source adjusts to provide pin-point to 1-in. diameter lighting directly under the objective lens. Made by **Wales-Strippit Corp.**, 363 Payne Ave., North Tonawanda, N. Y.

For more details circle NED-73 C7 on enclosed inquiry slip

Set-Up IS A SNAP



with BUSCHMAN Portable Conveyors
FEATURING
"QUICK-EEZ"
Coupling

Pick up . . . place . . . in line every time! With both ends the same, BUSCHMAN portable conveyor sections always match. No more swinging . . . no more shifting . . . no damaged hooks. Buschman "QUICK-EEZ" Coupling makes set-up or rearrangement a snap . . . saves time, space, labor . . . yet provides rigid support. Complete line in steel or lightweight aluminum. For conveyor convenience and flexibility, order BUSCHMAN! Immediate delivery from local dealer's stocks.

Write for Bulletin #15 today.

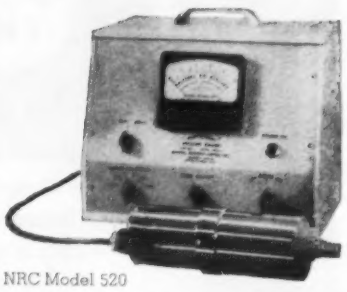
PRODUCE MORE . . . FOR LESS
Buschman CONVEYORS

THE E. W. BUSCHMAN CO.
4482 Clifton Ave., Cincinnati 32, Ohio

C-331-EWB

For more details circle NED-74 C7 on enclosed inquiry slip

Rugged New Vacuum Gauge *With Six Ranges Covering Pressures from 1000 mm. to 0.1 micron*


NRC Model 520

The new NRC Model 520 Alphatron (R) Ionization Vacuum Gauge is equally ideal for the laboratory and production floor. It is both precisely accurate and nearly immune to abuse. Ruggedized new circuitry eliminates troublesome components, minimizes contamination effects, and provides highly stable and linear amplification. A direct reading, total pressure gauge with almost instantaneous response, the Model 520 is accurate to ± 2% and linear over the entire range. Drift is less than 0.5% despite wide line voltage variations. It is especially useful with a recorder or controller and makes an efficient leak detector. Write today for Bulletin G-20

NRC Equipment Corporation
Subsidiary of National Research Corporation
Dept. 29C Charlemont Street Newton Highlands, Mass.

For more details circle NED-75 C7 on enclosed inquiry slip

FREE!
NEW SOLENOID VALVE CATALOG

Atkomatic's completely new engineering guide . . . Catalog 200-A
Automatic flow control —air, gas, steam, liquids
Send for it!

Solve YOUR flow control problems Atkomatic-ly

Order from a complete line of two-way solenoid valves . . . fully illustrated and described in Atkomatic's new engineering catalog. Contains flow charts, coil charts, dimensions, applications. For economical, trouble-free operation depend on Atkomatic.

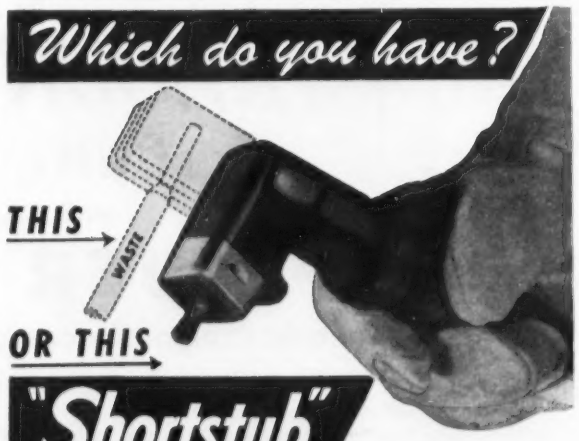
- Built to your specifications
- Individually tested
- Packless
- Tight closing
- Low maintenance
- Rugged, dependable
- Bronze or stainless steel
- Temperatures to 450°
- High and low pressures
- ¼" to 3" full port pipe size

SEND TODAY FOR CATALOG 200-A

Atkomatic VALVE CO., INC.
DEPT. 1-J, 545 W. ABBOTT ST., INDIANAPOLIS, INDIANA

For more details circle NED-76 C7 on enclosed inquiry slip

Which do you have?



"Shortstub" ELECTRODE HOLDERS

Convert the total fluxed portion of every electrode into weld metal — REDUCE STUB WASTE TO A MINIMUM

TWO SIZES FILL ALL NEEDS
See your local welding Distributor or write for further information

SPECIFICATION

Model No.	Cap. Amps.	List Price
4	400	7.70
6	600	8.80

Quantity prices save you 10 to 20%

"SHORTSTUB" is now recognized as the New Standard for Welding.

Manufactured by
BERNARD WELDING EQUIPMENT COMPANY
10228 AVENUE N, CHICAGO 17, ILLINOIS

For more details circle NED-77 C7 on enclosed inquiry slip

BOSCH* Builder's Hammers Cut Maintenance Costs 40%

Contractors and builders report maintenance costs reduced 40% when they switched to Bosch Builder's Hammers. The unique design of these tools does away with gears and cranks — greatly lowers maintenance costs. Easy-to-operate, Bosch Hammers deliver both heavy, straight, impact blows — for chiseling or gouging — plus an *automatic rotary impact action for drilling*. Contact your nearest Homelite representative — or write Homelite for complete information.

Bosch Builder's Hammers are available with either 110 Volt AC-DC or high-cycle motors.

*BOSCH (Germany)

Manufacturers of Carryable Pumps Generators • Blowers Chain Saws

Distributed by:

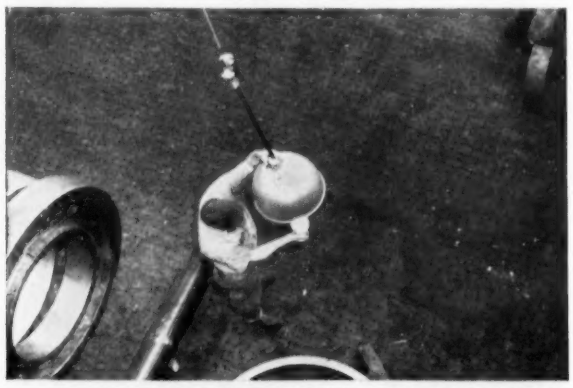
HOMELITE

a division of Textron Inc.

8503 Riverdale Ave., Port Chester, N. Y.

▲ For more details circle NED-78 C7 on enclosed inquiry slip ▲

Here's a company cutting costs!



with THOMPSON HANGERS

For details and prices, write for new Bulletin TH-56.

This maintenance man is relamping a high-bay luminaire at floor level. He needs no ladder, scaffold or assistance to lower the light 30 feet, service it and then position it . . . all within minutes. And he is absolutely safe from electrical hazards.

When lights are mounted on THOMPSON HANGERS, luminaire maintenance becomes a simple one-man job. In fact, there is no faster, safer, more economical means of servicing lights mounted 16 feet or more above floor level.

THE THOMPSON ELECTRIC CO.

1138 POWER AVENUE • CLEVELAND 14, OHIO

7296-TE

▲ For more details circle NED-79 C7 on enclosed inquiry slip ▲

SUTORBILT

BLOWERS
GAS PUMPS
VACUUM PUMPS

Special features, such as heavy duty roller bearings, wide face herringbone gears and the exclusive Sutorbilt timing hub are all designed to assure you trouble-free service and longer operating life. Simplicity of design and rugged construction are further plus values.

Standard units are available in capacities to 20,000 CFM and pressures or vacuums to and including 10 psig.

S-1

Write for the name of the representative nearest you or check your local telephone book.

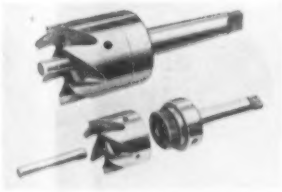
SUTORBILT CORPORATION

Maywood, Calif.

SUBSIDIARY OF FULLER COMPANY • CATASAQUA, PA.

▲ For more details circle NED-80 C7 on enclosed inquiry slip ▲

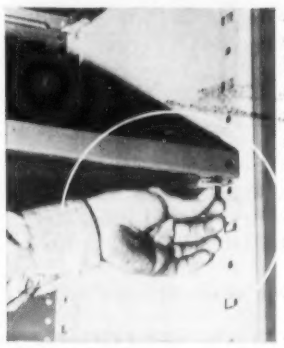
HOLE-MILLING TOOL
mills holes in up to ¾-in. stock



Operating like a conventional hole saw, the Hole-Mill produces deep or through holes in flat plate up to ¾-in. thick, or on curved cylindrical pieces. Tool will go through stock in one pass without clearing chips and can be used on alloy as well as low carbon steels. The Hole-Mill is made from M3-type high-speed steel and consists of replaceable cutter which threads onto separate arbor equipped with removable, pin-type pilot. Arbors accommodate several mill sizes and are offered in standard tapers and straight shanks. Mills can be used in common machine tools as well as heavy duty electric and pneumatic drills. Hole sizes from 1 to 4 in. are available. Made by **Robert H. Clark Co.**, Dept. 250, 9330 Santa Monica Blvd., Beverly Hills, Calif.

▲ For more details circle NED-81 C7 on enclosed inquiry slip ▲

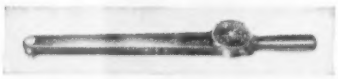
STEEL SHELVING
shelves adjusted without tools



Assembled with bolts used only in the frame, base and back, Erectomatic steel shelving is designed to minimize installation time and provide maximum adaptability. Locking device holds each shelf in place, yet alows quick removal or repositioning without tools. Shelf spacing can be on 3-in. centers. Bin fronts are bolted to shelves, precluding their removal to relocate the shelf. Depths of 12, 18 and 24 in., widths of 24, 30, 36, 42 and 48 in. and heights of 39, 51, 63, 75, 87, 99 and 111 in. are available, along with vertical dividers, back and side enclosures and sliding or swinging doors. Made by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

▲ For more details circle NED-82 C7 on enclosed inquiry slip ▲

TORQUE WRENCH
ratings up to 0-200 lb-ft



Large, easily read dial and a removable and reversible plug are featured by this rigid frame torque wrench. Unit is fully enclosed so that pressure can be applied anywhere along wrench. A handle extension can also be used, if required. Wrench is available in 0-300 lb-in., 0-2400 lb-in., 0-25 lb-ft and 0-200 lb-ft ranges. Made by **Apco Mossberg Co.**, 102 Lamb St., Attleboro, Mass.

▲ For more details circle NED-83 C7 on enclosed inquiry slip ▲

FEEDMATIC HOPPERS

Feedmatic Rotary Hoppers automatically deliver parts in proper position for assembly through attached feed tracks. By eliminating high cost hand operations, Feedmatics reduce assembly time—cut costs.

Use Feedmatics for high speed delivery of small parts to machine tools, grinders or special production machines—or for accurate sorting, counting and inspection operations. Feedmatic Hoppers are applicable to a wide range of parts: nuts, screws, bolts, pins, stampings, forgings, cylindrical shapes, etc. Write today, and send samples of your small parts.

WRITE TODAY FOR DESCRIPTIVE BULLETIN

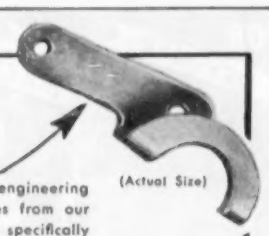
SALES OPPORTUNITY: Valuable territories are now available for qualified factory representatives to sell Feedmatic Rotary Hoppers. Write for details stating lines presently handled.

FEEDMATIC-DETROIT, INC.

26907 WEST SEVEN MILE RD. DETROIT 19, MICHIGAN

▲ For more details circle NED-84 C7 on enclosed inquiry slip ▲

SAVED— $696.00 or 90%



(Actual Size)

After consultation with our engineering staff and with the use of dies from our tremendous library maintained specifically to save our customers time and money, this part illustrated actually saved one manufacturer 90% of usual production costs!

Price breakdown was as follows:	
Tools	$79.00
Labor	.059
Tapping	.016
Material	.0081

LOW die cost
FAST delivery

- Blanking
- Forming
- Piercing
- Drawing
- Extruding
- Stenciling
- Tapping
- Counter-sinking
- Plating
- Machining
- Painting
- Grinding
- Welding

Yes, WLS SPEEDTOOLING for small quantity stamping needs is a saver every time! A radical production advancement, it eliminates most of the cost required for permanent dies. Finished parts are produced to tolerances as close as those from tools costing ten times as much. When jobs are completed WLS SPEEDTOOLING is stored for future use.

Use WLS for production quantities up to 100,000 when low cost, fast delivery, possible design changes for virtually nothing, are important factors!

FREE

1. Write now for a free sample part with a cost summary.
2. Our free bulletin also illustrates 40 small stampings.
3. Send in your blueprints to our engineering department for a prompt quotation.

WLS **STAMPING COMPANY**

3287 E. 80th Street • Cleveland 4, Ohio

▲ For more details circle NED-85 C7 on enclosed inquiry slip ▲

CM Lodestar®

ENTIRELY NEW... differently NEW

Built to serve you for its normal life without maintenance

Lodestar is the first truly "heavy duty" version of the small electric hoist. It will serve you without costly maintenance or interruptions in your work schedules.

FLEXIBLE LINK CHAIN

CAPACITIES: from ⅛ to 1 ton. Single and 3 phase. ¼ ton model weighs only 51 pounds.

PUSH BUTTON CONTROL

$149.50 and up

WRITE US: Or call your CM distributor for literature, prices and quick delivery from stock.

CHISHOLM-MOORE HOIST DIVISION

Columbus McKinnon Chain Corporation

Tonawanda, New York

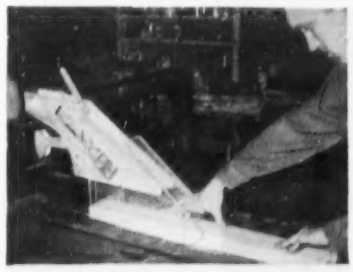
Regional Offices: New York, Chicago, Cleveland

In Canada:

McKinnon Columbus Chain Limited, St. Catharines, Ontario

CM HOISTS AND CHAIN

▲ For more details circle NED-86 C7 on enclosed inquiry slip ▲



NEW

Clear-Vue Saw Guard
It's transparent...It's automatic

Here is the most practical saw guard ever developed for tilting table or arbor saws. It's always in place... always protects; yet it is never in the way... never blocks a clear view of the work.

Clear-Vue Saw Guards rise automatically to wood level; close immediately at end of piece. Two automatic devices with grip teeth prevent kick-backs... giving complete safety to all sawing operations... at low cost. Send for Bulletin No. 63

Safety Equipment For Every Hazard

G-S SAFETY-RATED PRODUCT

GENERAL SCIENTIFIC EQUIPMENT CO.

7518 Limekiln Pike • Philadelphia 50, Pa.

▲ For more details circle NED-87 C7 on enclosed inquiry slip ▲

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition.

WATERLOO METAL BOXES AND CHESTS

Write for FREE book, including complete information.

Waterloo

VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

▲ For more details circle NED-88 C7 on enclosed inquiry slip ▲

▲ For more details circle NED-89 C7 on enclosed inquiry slip ▲

Extreme thermal shock has little effect on VYCOR brand glasses.

Can this glass answer any problem of yours?

Heat? VYCOR® brand glasses withstand temperatures as high as 1300° C. (in intermittent service).

Ultraviolet transmission? VYCOR brand glasses are available for ultraviolet transmittance at 365, 254, or 185 millimicrons.

Infrared transmission? VYCOR brand glasses will transmit infrared up to 3.5 microns—with or without transmission of visible light.

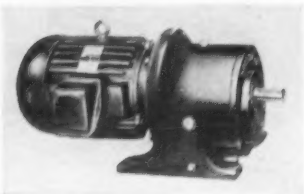
VYCOR brand glasses are resistant to most chemicals, have high electrical resistivity and low dielectric loss.

WRITE FOR BULLETIN B-91. Contains charts, tables and complete information about all 7 VYCOR brand glasses.

CORNING GLASS WORKS
56-3 Crystal Street, Corning, N.Y.
Corning means research in Glass

▲ For more details circle NED-90 C7 on enclosed inquiry slip ▲

GEARMOTOR
stocked in ½ to 15-hp sizes



Cartridge assembly and electric motor can be removed from the gear case of the Ritespeed gearmotor without disturbing the base of the unit. Integral sizes have totally enclosed, fan-cooled motors with NEMA standard D flange. Units are stocked in all speeds from ½ to 15 hp, and sizes from 20 to 75 hp can be ordered. Made by **Rockwood Pulley Mfg. Co.**, Dept. A, 20 Crosby St., New York 13, N. Y.

▲ For more details circle NED-91 C7 on enclosed inquiry slip ▲

BOARHIDE GLOVES
feature long wear, flexibility

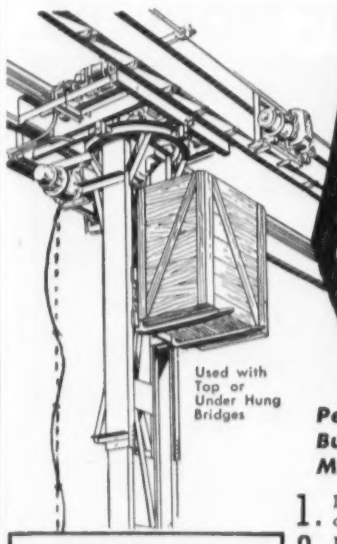
Natural properties of boarhide and a tanning process combine to give this line of industrial gloves good flexibility in service. Tests show that the hide also has high abrasion resistance and long wearing qualities. Available styles are safety cuff, gauntlet and knit wrist. All have seamless leather index finger, leather tops, welted thumb crotch, forchette seams, lined palm and cotton flannel backs. They can be dry cleaned when dirty. Made by **Wearhide Glove Co.**, 143 N. Main St., Rockford, Mich.

▲ For more details circle NED-92 C7 on enclosed inquiry slip ▲

DIAMOND BLADES
for stone, masonry and concrete

Added to line of carbide-bonded diamond blades are four new specifications for use in cutting stone, masonry and concrete. The NFT Bond, for cutting marble and other dense, nonabrasive stone materials, affords long blade life without decrease in cutting speed. Glazed tile and acidproof brick are successfully cut by NT Bond and the NTB Bond general-purpose masonry blades. The NTC Bond will cut concrete with nonabrasive aggregates, such as green concrete with limestone aggregate and cured concrete with ribe gravel aggregate. Made by **Consolidated Diamond Tool Corp.**, Dept. NED, 320 Yonkers Ave., Yonkers, N. Y.

▲ For more details circle NED-93 C7 on enclosed inquiry slip ▲



NEW ALL-STATE STACKER CRANE

Permits Use of Full Building Height and Minimum Aisle Width!

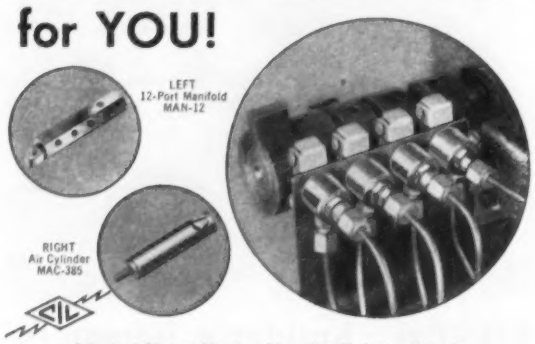
- Inner Running Trolley
- Full Revolving, Telescoping Stacker
- Roller Bed Suspended by Large Hook Roller
- Adaptable for Any Fork Lift Attachment
- Stacker Can Be Used as Transfer Unit in Conjunction with Underhung Cranes

1. Needs aisle only the width of load being handled.
2. No special training needed to operate it.
3. Uses present electrical installations and runways.
4. Takes advantage of the entire building height — uses 240% more space than presently being utilized in fork lift truck handling storage areas.

ALL-STATE Engineering Co., Inc.
7058 North 76th St.
Milwaukee, Wisconsin

▲ For more details circle NED-94 C7 on enclosed inquiry slip ▲

MONEY in this "BANK" for YOU!



A bank of Clippard Miniature Three-Way Air Valves (MAV-3) like this, cycled with Clippard Miniature Pneumatic Cylinders, Manifolds, Fittings and Accessories for automatic or semi-automatic work functions can produce immediately BANKABLE dollars and cents for you thru faster, better, more profitable output!

Clippard Miniature Pneumatic Devices are small in size, easy to mount and as versatile as your imagination. They are ruggedly made for millions of cycles of trouble-free operation, yet are surprisingly low in cost.

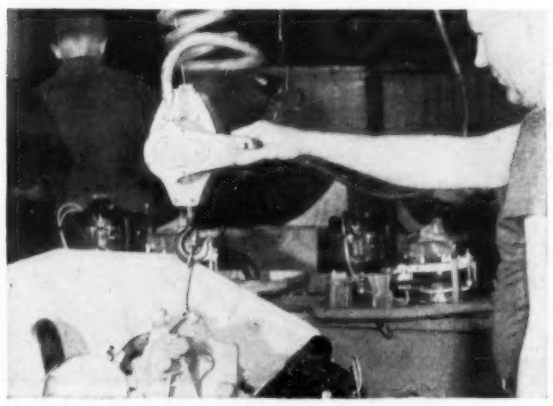
Keep a supply of Clippard pneumatic components on hand in your stockroom to lick that next automatic control, work feeding or holding operation on a moment's notice. Write NOW for free literature and attractive prices.

DEALERS-DISTRIBUTORS: Write for attractive NEW sales proposition

Clippard INSTRUMENT LABORATORY, INC.
7368-N Colerain Road, Cincinnati 24, Ohio
Manufacturers of R.F. Coils, Electronic Equipment, Miniature Pneumatic Devices

▲ For more details circle NED-95 C7 on enclosed inquiry slip ▲

easy does it with this one-hand lift



Keller Tool Air Hoist

raises and lowers 50 to 150 lb. a full 9 ft. Lifting speed from a slow creep to 40 f.p.m. Leaves one hand free to control parts or machinery. Weighs only 14 lb. Motor won't burn out. Relieves larger hoist for heavier handling.

SEND FOR BULLETIN 86A

ENGINEERING FORESIGHT—PROVED ON THE JOB IN CONSTRUCTION, MINING, PETROLEUM AND GENERAL INDUSTRY

GARDNER-DENVER
KELLER TOOL division, Grand Haven, Michigan

▲ For more details circle NED-96 C7 on enclosed inquiry slip ▲

DESIGNED FOR LOW-COST SURE PROTECTION

S.S.White
PLASTIC PLUGS AND CAPS

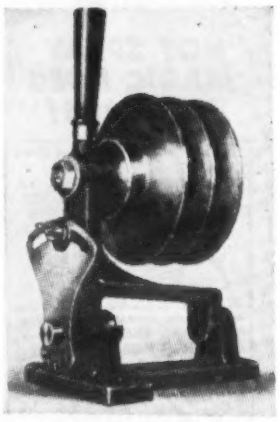
SEAL . . . against dirt, moisture, loss of fluids or lubricants!
PROTECT . . . against damage to threads!

S.S. WHITE Plastic Plugs and Caps are available in a wide selection of standard sizes – plain and threaded. For literature and samples, just write to Dept. 7P.

THE S.S.White PLASTICS DIVISION
10 East 40th St., New York 16, N. Y.
Western Office: 1839 West Pico Blvd., Los Angeles 6, Calif.

▲ For more details circle NED-97 C7 on enclosed inquiry slip ▲

VARIABLE SPEED CONTROL



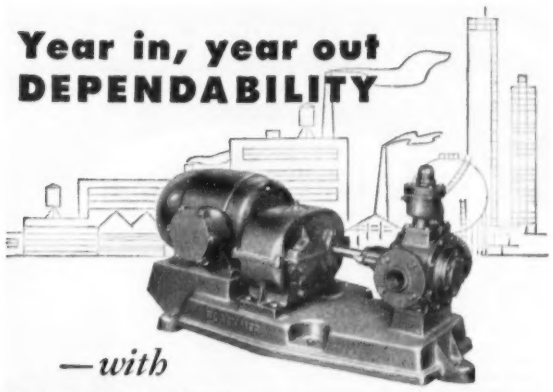
Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameter, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Adv.**

▲ For more details circle **NED-98 C7** on enclosed inquiry slip ▲

Year in, year out DEPENDABILITY



—with

BLACKMER rotary pumps

Cut maintenance costs and delays due to pump failures through these outstanding features:

- self-adjusting for wear vane construction
- replaceable vanes and liner
- self-priming with high suction lift
- wide range of applications

BLACKMER *liquid materials handling* ®

BLACKMER

Industrial, Hand and Truck Pumps, Strainers, Pressure Control Valves
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.
DIVISION SALES OFFICES — NEW YORK • ATLANTA • CHICAGO
GRAND RAPIDS • DALLAS • WASHINGTON • SAN FRANCISCO
See Yellow pages for your local sales representative

▲ For more details circle **NED-99 C7** on enclosed inquiry slip ▲

▶ If you are looking for new ways and means to improve your product, *and save money too,* here's an idea source guaranteed to spark your imagination and give you a wealth of hints, tips, and suggestions.

This 20-page fact-filled STAR catalog contains complete descriptive and engineering data on the full line of STAR Ceramics. A big selection chart, complete with mechanical and electrical properties, makes the job of selecting the right STAR material for your product a cinch. Like a free copy? Write *today* for Catalog 57.

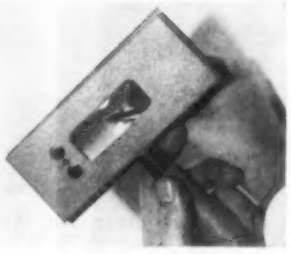
the STAR porcelain company

50 Muirhead Avenue, Trenton 9, N.J.

California Representatives:
So. Calif.: Edwin E. Starr, 4101 Rhoads Ave., N. Hollywood, Calif. STanley 7-5879.
No. Calif.: Thermo Materials, Inc., 44 Encino Ave., Palo Alto, Calif. DAvenport 6-2780.

▲ For more details circle **NED-100 C7** on enclosed inquiry slip ▲

FLUORESCENT HAND MAGNIFIER
has either two or four-power lens



Normal use of both eyes for inspection of small objects is possible with the Lite-Mite fluorescent hand magnifier. Lightweight unit is equipped with a 1 x 2½-in. two or four-power lens. Magnifier has a 6-ft cord and plug with ballast in the line, and uses two 110-v 4-w fluorescent lamps. Made by **Stocker & Yale, Inc.,** 77 Green St., Marblehead, Mass.

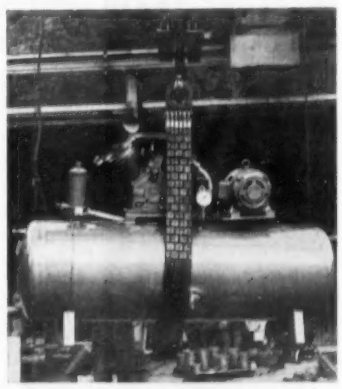
▲ For more details circle **NED-101 C7** on enclosed inquiry slip ▲

SUBMINIATURE CONNECTORS
for compact electronic equipment

Suited for use where space is at a premium, series 22 Continental connector is available with 7 to 34 contacts, with or without aluminum hoods. Illustrated 11-contact unit measures only 0.78 x 0.27-in. Reversed guide pin and stainless socket assure polarization. Self-aligning floating contacts of phosphor bronze are gold plated over silver for low contact resistance and soldering ease. Made by **DeJur-Amsco Corp.,** Electronic Sales Div., Dept. NED, 45-01 Northern Blvd., Long Island City 1, N. Y.

▲ For more details circle **NED-102 C7** on enclosed inquiry slip ▲

CUSHIONED WIRE ROPE SLING
rubber block links protect loads



Made up to any desired size or capacity, Meissen hoisting sling is available in choke or straight sling styles. Protecting oil-resistant rubber pads are interlaced on wire rope sling members to provide a slip-proof cushion to protect loads during handling and to prevent marring highly finished surfaces. Slings can be made with four or more strands, in any length and with eyelet, loop, choke or other end fittings to suit a particular handling need. Distributed by **Herculoc Corp.,** Dept. H-4, 201 62nd St., Brooklyn 20, N. Y.

▲ For more details circle **NED-103 C7** on enclosed inquiry slip ▲

▲ For more details circle **NED-104 C7** on enclosed inquiry slip ▲

AURAND

CLEANING TOOLS
ELECTRIC OR PNEUMATIC

Zip away **SCALE RUST PAINT**

Powerful rotary chipping action completely removes stubborn accumulations from iron, steel, brick, concrete, etc. with less effort. Adjustable depth shoe for controlling depth of cut. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

Write Dept. 14 for the money-saving facts.

AURAND MFG. & EQUIP. CO.
1210 Ellis St. • Cincinnati 23, Ohio

▲ For more details circle **NED-105 C7** on enclosed inquiry slip ▲

ANNOUNCING:
The Finest
New Pneumatic Industrial Tire
in Years

The Great New Super Rib

—Built with Triple-Tempered 3-T Cord for Extra Strength and Stamina

YOU probably know that rugged stop-and-start duty takes a lot out of tires.

Now, Goodyear presents a new pneumatic tire that has a whale of a lot to give in many kinds of tough operations – the new SUPER RIB.

Built with a tread of five broad riding ribs that compress into sharp-edged "teeth," the SUPER RIB assures faster nonspin starts, safer nonskid stops. Its wide, flat tread also assures greater stability for safer stacking.

The exclusive Triple-Tempered 3-T Cord provides the strongest, most durable tire body ever developed—makes tires far more resistant to heat and bruises.

You'll find this superb tire ideal in any service where a smooth-riding pneumatic tire is needed—fork-lift trucks, mine cars, baggage trucks, aircraft servicing vehicles, boat trailers, dozens of other applications. For complete information, call your Goodyear dealer or write: Goodyear, Industrial Tire Sales, Akron 16, Ohio.

Look for this sign: there's a Goodyear dealer near you.

Use the Right Tire for the Job — Buy and Specify

GOODYEAR
INDUSTRIAL TIRES

▲ For more details circle **NED-106 C7** on enclosed inquiry slip ▲

G-r-r-r-r-r-Great!
The GUARDIAN
25 AMPERE
POWER RELAY

Interchangeable Coil Assemblies

DIMENSIONS—Length 3⅝", Width 2½", Height 2⅝". WEIGHT—1 lbs.

Interchangeable Coil Assemblies provide innumerable operating variations for experimentation—production—field servicing!

For motor starting, heater loads, other heavy duty jobs, control more power in less space with this new Guardian Power Relay. D.P.D.T. contacts for 25 amps. continuous duty, 230 V., A.C. Easily interchangeable coils rated at 6 to 230 volts A.C., 6 to 220 volts D.C. No solder connections necessary.

Arrange for delivery of a production sample. Write for bulletin PR.

GUARDIAN ELECTRIC
1626-C W. WALNUT STREET CHICAGO 12, ILLINOIS

VISIT BOOTHS 2502-2504 I.R.E. SHOW

For more details circle NED-107 C7 on enclosed inquiry slip

NOW! A NEW PEAK IN

Magnetic Permanency!

It's next to impossible to demagnetize Stackpole Ceramagnet® (ceramic) permanent magnets under any condition of use! Magnetism is permanently retained even in the presence of strong opposing fields or when the magnets are used without "keepers" or other short-circuit conditions.

Ceramagnet magnet energy product is adequate for practically any need. Non-critical ceramic materials are used exclusively. Electrical resistance approaches infinity. Eddy losses are practically nil. Permeability of approximately 1.0 is about that of air.

In most applications requiring relatively large sizes or intricate shapes, Ceramagnet Magnets show important cost savings.

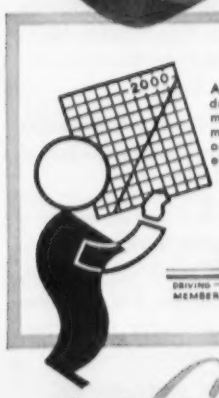
Present and potential uses include:

LATCHES • DRIVES • POLE PIECES • DOOR CHECKS • SHUNTING CONTACTORS • MAGNETIC CHUCKS • MOTOR ROTORS • TOYS METERS • RELAYS • OIL FILTERS • COUPLINGS • SMALL GENERATORS • MAGNETOS ION TRAPS • H-F ALTERNATORS • REGULATORS • FOCUSING or DEFLECTING for cathode-ray tubes . . . and dozens of other applications.

WRITE FOR CATALOG RC-10A

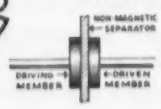
STACKPOLE CARBON COMPANY
St. Marys, Pa.

4 POLES ON ONE FACE



As in this typical magnetic drive unit, Stackpole Ceramagnet permanent magnets may be magnetized in various arrangements with 4-6 or even 8 poles on one face.

A SEALED MAGNETIC DRIVE



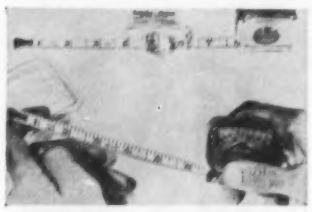
Ceramagnet assemblies offer unique possibilities as drives and clutches, including sealed applications where unquestioned magnetic permanency is a "must".

STACKPOLE CeraMAGNET®

The Permanent Magnets that are REALLY PERMANENT

For more details circle NED-108 C7 on enclosed inquiry slip

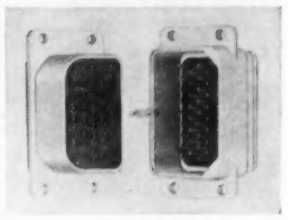
STEEL TAPE RULE
has controlled-speed blade return



Flexible ½-in. steel blade of the Power-Tape rule is automatically returned to its case under controlled speed by pushing a button on the side of the case. Blade whipping is thus eliminated. When the button is released, the blade comes to a stop. Featuring molded nylon internal control mechanism, the tape is available in 6, 8, 10 and 12-ft lengths. It also features self-adjusting end hook, 2-in. case, markings in inches and feet-and-inches, and black lettering on white background. Prices range from $1.19 to $1.98. Made by **Evans Rule Co.**, Dept. NED, 400-416 Trumbull St., Elizabeth, N. J.

For more details circle NED-109 C7 on enclosed inquiry slip

RACK & PANEL CONNECTOR
multiple circuit electrical unit



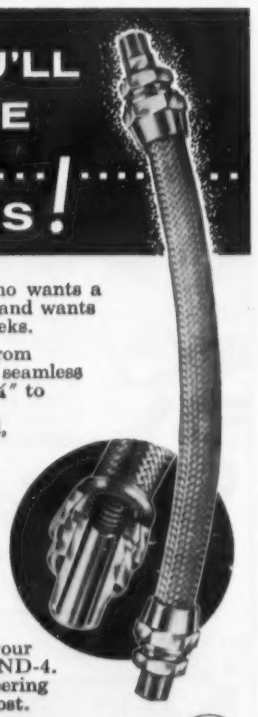
Protection against harmful effects of vibration is provided by the SR type rack and panel electrical connector which incorporates a resilient insert in a solid shell. Contact engagement force is low. Connector is easily pressurized to MIL specification. It has closed entry sockets, gold plated contacts, cadmium plated clear iridite finish and operates in range from −67 to 250° F. Insert patterns mate with existing equipment. Made by **Bendix Aviation Corp.**, Scintilla Div., Box 188, Sidney, N. Y.

For more details circle NED-110 C7 on enclosed inquiry slip

PRESSURE TRANSMITTER
indicating type transmits air signal

Capable of measuring pressures ranging from 0 to 30 in. of water to 0 to 6000 psi, model 44 pressure transmitter sends a 3 to 15-psi air signal to indicating, recording or controlling instruments. Choice of standard Foxboro pressure elements, including spirals, helicals, bellows and diaphragms, is provided to accommodate the various ranges. Element materials are available to withstand various corrosive process fluids. Transmitter has a 4⅛-in. long eccentric indicating scale visible from 20 ft. Made by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

For more details circle NED-111 C7 on enclosed inquiry slip



Welcome words to a man who wants a flexible metal hose connector and wants it now, . . . not in days or weeks.

Packless now has, available from inventory, random lengths of seamless flexible, metal hose, in sizes ¼" to 1¼" I.D., with appropriate fittings, brazed or mechanical, that you can stock and install *in your own plant.*

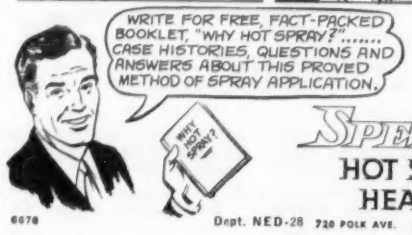
Find out more about this new "do-it-yourself" method of licking noise, vibration, expansion or any form of pipe travel by stocking Packless flexible metal hose in all required sizes *before* trouble develops.

For further details send for your copies of Bulletins DC and IND-4. Consulting and design engineering services offered at no extra cost.

PACKLESS METAL HOSE INC.
730-39 South Columbus Ave., Mt. Vernon, N. Y.

For more details circle NED-112 C7 on enclosed inquiry slip

SPEE-FLO
HOT SPRAY MAGIC DOES IT AGAIN!



SPEE-FLO
HOT SPRAY HEATERS

6678 Dept. NED-28 720 POLK AVE. • HOUSTON, TEXAS

For more details circle NED-113 C7 on enclosed inquiry slip

Make a CLEAN SWEEP for savings with a DINGS MAGNETIC SWEEPER

Pick up dangerous metal from

- *parking lots* • *driveways*
- *inter-plant roadways* • *storage yards*
- *docks* • *railway sidings*
- *floors and aisles*

A Dings Permanent Magnetic Sweeper is ideal for the many "clean sweep" jobs you'll find for it — picking tire-puncturing metal out of the path of trucks, plant equipment, or employees' cars . . . preventing accidents by sweeping up hazardous metal from aisles and floors.

Dings Magnetic Sweepers are light weight; waterproof for outdoor operation; easy to use suspended from any mobile equipment, with practically no maintenance. No wires are needed. Permanent strength is guaranteed. Sizes, 36" to 96" in length.

Trailer-mounted units also available.

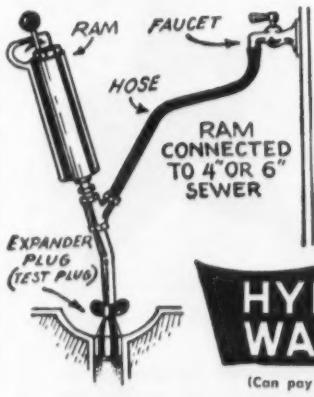
RS-157-1/9

Dings

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave.
Milwaukee 46, Wis.

For more details circle NED-114 C7 on enclosed inquiry slip

Enjoy 30 Day Free Trial!



Easily clears the most stubborn drain and sewer stoppages

The ideal plumbing service tool for maintenance men!

HYDRAULIC WATER RAM

(Can pay for itself in one application!)

Why lose time, suffer inconvenience, waste dollars on needlessly costly plumbing service? The Hydraulic Water Ram clears severest blocked drain lines and sewers in minutes. No chemicals, no snakes, no electric cables, no pushing through. Saves costly outside help, or expensive torn up piping. Uses IMPACT, (HYDROSTATIC) a basic scientific principle of POSITIVE HYDRAULIC POWER. Shatters hard grease, debris, other blockage into fragments easily flushed down to main. Works perfectly, vent or no vent! Services up to 6" pipe. Works perfectly on all types of clogged toilets, sinks, sewers, etc. Can pay for itself in a single application. Nothing to wear out. Good for a lifetime. Thousands in use, including over 3,000 in government agencies. You risk nothing. Write for details on how to get free 30 day trial at our expense.

Write for Information, Prices, Details of Free Trial Offer!

HYDRAULIC MANUFACTURING CO.
Dept. ND-3 Kiel, Wisconsin

For more details circle NED-115 C7 on enclosed inquiry slip

CESCO...RIGHT—BEFORE YOUR EYES!

New CESCO plastic safety glasses
WITH ULTRA-MODERN LENS STYLE

• These new CESCO plastic frame safety glasses with the F7 shape lenses are not only superior in their field from the standpoint of fit and comfort but many users prefer their shape and style to that of most personal glasses.

New CESCO plastic frame safety glasses are available in 3 sizes. Note modern shape and style.

In addition to their fine appearance, these safety glasses have many outstanding features. Among them:

Frames are rigid and will retain original shape without bowing

Choice of 2 colors—opaque slate (to eliminate light reflection) or translucent flesh

Nosepads are broad bearing to give comfortable distribution of weight

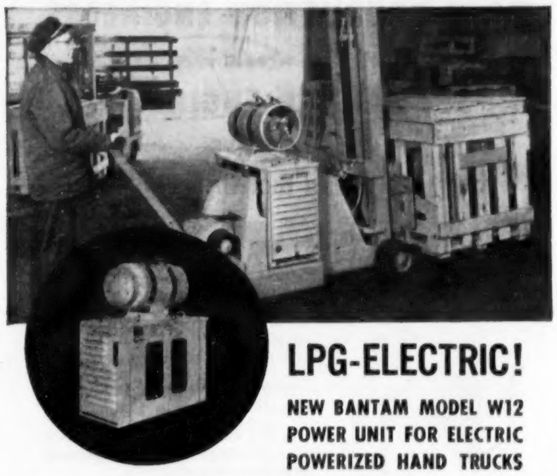
Lenses are interchangeable—the same lens fits either right or left side • **Available in three sizes**

ASK your CESCO Safety Equipment Distributor to show you the new modern plastic frame safety glasses with the F7 lens—and the many other safety glasses and goggles in the complete CESCO line

CHICAGO EYE SHIELD COMPANY
2322 Warren Boulevard
Chicago 12, Illinois

CESCO FOR SAFETY

For more details circle **NED-116 C7** on enclosed inquiry slip



LPG-ELECTRIC!

NEW BANTAM MODEL W12 POWER UNIT FOR ELECTRIC POWERIZED HAND TRUCKS

Ready-Power combines full electric power *with no fatigue* AND the economy and low maintenance of LP-gas in one compact new power unit. Installation is easy on any make of motorized electric hand truck with adequate sized power compartment. Unit accommodates an interchangeable 20-pound fuel cylinder, includes a quick-disconnect fuel line coupling for safety, has removable end, side and cover plates for easy accessibility. LP-gas components are listed by Underwriters' Laboratories and comply with Factory Mutual recommendations. Write for information.

READY-POWER
The READY-POWER Co., 3832 GRAND RIVER AVE., DETROIT 8, MICH.
Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle **NED-117 C7** on enclosed inquiry slip

FAMOUS Palley CATALOG SOON TO BE RELEASED!
396 PAGES PACKED WITH BARGAINS
ALL NEW 1957 CATALOG... GREATER THAN EVER BEFORE FULLY ILLUSTRATED

THOUSANDS UPON THOUSANDS OF INDUSTRIAL, COMMERCIAL AND CONSUMER ITEMS AT GREATER SAVINGS THAN EVER BEFORE! New Merchandise! Top Quality GOV'T SURPLUS!

HYDRAULIC Cylinders, Pumps, Motors, Fittings, Tubing, Gauges, Instruments and Complete Assemblies of every description. A tremendous selection of Gov't Surplus as well as our own Custom Made line. And just wait until you see these prices!

TOOLS – SUPPLIES – EQUIPMENT in Electrical, Mechanical and Building lines. Aircraft Parts and Supplies. Electric Motors, Generators and Portable Power Plants. Pumps of all types. Tons and tons of Hardware. Fans, Blowers, Ventilators, etc.

WATCH THIS AD FOR ANNOUNCEMENT OF THE PUBLICATION DATE!

SAVE! SPECIAL GOV'T SURPLUS

2500 lb. WINCH HOIST — $30.00 VALUE — Ideal for use in garage, shop, boat yard, farm, on trucks, etc. Has bronze, worm gear drive with 24 to 1 gear ratio and 3-speed crank. Comes with 18 ft., 3/16", high tensile, steel cable. 29.50
WINCH HOIST — Same as above but has free-spool, pull-out clutch. 32.50
MOUNTING FRAME — for both hoists — 4.50
NOTE: We carry a complete line of hoists from small portables to huge, heavy duty types. Write for details.

SPECIAL 40,000 lb. THRUST HYDRAULIC CYLINDER — A GOV'T SURPLUS BARGAIN! This cylinder may be oil or air operated. Produces up to 40,000 lb. thrust with oil, on a 3000 PSI line pressure. May also be used as a low pressure air cylinder. Has a 4" bore and 18" stroke. 30½" long overall. Has been Navy overhauled. LIKE NEW! $49.95
NOTE: Our complete line of Hydraulics, including our own Custom Made line, is one of the largest stocks in the country. What we cannot supply we will manufacture to order.

UNIVERSAL JOINTS — Has a heavy duty, solid cast Bronze body. Rotates from 90° to 180° as desired. Has 29/32" diameter steel shafts with a ball and socket joint. In excellent condition. Ready-to-use!!! $5.95
Write TODAY for complete list of many other types of universal joints, hoists, hydraulics, etc.

SPECIAL 180° OFFSET DRIVE — For use where tremendous power at a low take-off RPM is desired. Has 6 gears rotating on self-lubricating, hi-speed roller bearings. 85 to 1 gear ratio. Shafts are 1/1/4" and 3/8" diameter.
USED in good condition ONLY $5.95
NEW in excellent condition . . NOW $8.95

SAVE ON STEEL CABLE

ALLOY STEEL — Finest quality Alloy Steel cable. Rust & corrosion resistant.

Size	Price per ft.
7 x 7 STRAND	
1/16"	5¢
3/32"	6½¢
7 x 19 STRAND	
1/8"	9½¢
5/32"	10¢
3/16"	12½¢
1/4"	13½¢
9/32"	16½¢

STAINLESS STEEL — Aircraft Quality. Rust & Corrosion Proof. You can not beat this Bargain.

Size	Price per ft.
7 x 19 STRAND	
1/16"	7¢
3/32"	14¢
5/32"	21¢
3/16"	23¢
7/32"	29¢
1/4"	38¢
5/16"	47¢

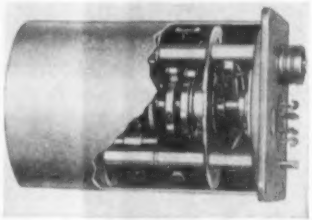
SAVE ON NEW NYLON ROPE — Very Finest Nylon Rope. Top Quality. Available in Sizes of 1/8" to 1" diam. Prices as low as 3¢ per running foot. Write Today for complete price list.

Palley's 2263 E. VERNON AVE. DEPT. NED-3 LOS ANGELES 58, CALIF.

Order From This Ad – P.O's accepted from well rated D&B firms. Prices are F.O.B. our Los Angeles Warehouse.

For more details circle **NED-118 C7** on enclosed inquiry slip

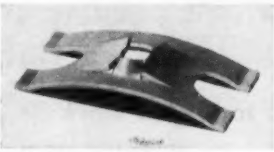
TIME DELAY RELAY
with from one to six contacts



All environmental requirements for aircraft and ground installations are met by type 825 hermetically sealed time delay relay. Measuring about 2⅜ x 2⅜ x 3 5/16 in. and weighing 30 oz or less, timer is available with from one to six contacts. Time cycles range from fraction of a second to several hours. Unit shown can be externally adjusted. A synchronous timing motor is used for 60 and 400-cycle applications, while for direct current, either a permanent magnet type or governor controlled motor can be used. Made by **Eagle Signal Corp.,** Industrial Div., Dept. NED, 202 Twentieth St., Moline, Ill.

For more details circle **NED-119 C7** on enclosed inquiry slip

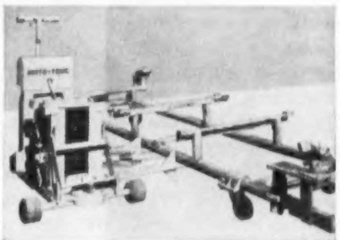
PUSHNUT FASTENERS
now offered in stainless steel



Type H Pushnut fasteners for unthreaded studs of die-cast nameplates, medallions and grilles are now offered in hardened 410 stainless steel for corrosion-resistant uses. Fasteners have four gripping teeth that hold tight even on hard or slippery plated studs, a spring arch that compensates for wear and turned up ends that slide smoothly. Sizes for 1/16, 3/32 and ⅛-in. studs are available. Made by **Palnut Co.,** Dept. 45-L, Glen Rd., Mountainside, N. J.

For more details circle **NED-120 C7** on enclosed inquiry slip

SIDE-HITCH TRACTOR
permits trailer load to overhang



Operating from alongside the trailer, this side-hitch electric tractor can move trailers loaded with materials which overhang the ends too far to make end coupling possible. Coupling is made by an electro-hydraulic clamp (available in any length or design) that engages the underside of the trailer frame. It is pivoted for use on either side of the tractor or for vertical locking when not in use. Trailers with four swivel wheels can be moved easily. Tractor is 33 in. wide by 44 in. long, is powered by a 12-v battery and has two speeds forward and reverse. Safety spring steering handle cuts off power and applies the brake when released. Made by **Moto-Truc Co.,** 1961 E. 59th St., Cleveland 3, O.

For more details circle **NED-121 C7** on enclosed inquiry slip

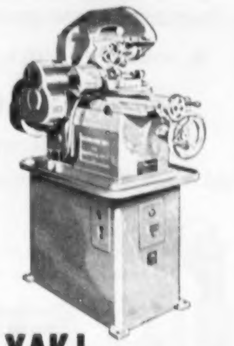
No muss, no fuss, with this easy-to-use REPUBLIC TOOL ROOM

A systematic storage arrangement using Republic tool room and shop equipment will save money, time, labor, floor space and headaches. Made at Republic's Berger Division, every item of durable Berger steel construction does an efficient job . . . provides easy access to tools, parts and other inventory. Included are Wedge-Lock, Convertible or Flexi-Bilt Shelving, Wedge-Lock Long Parts Storage Units, work benches, bar racks, special-purpose tool inserts and many other items. Call your nearest Berger representative or send for catalog describing Republic's big line.

REPUBLIC STEEL
BERGER DIVISION
1034 Belden Avenue • Canton 5, Ohio

For more details circle **NED-122 C7** on enclosed inquiry slip

The Hamilton No. 1-B Precision, Small-Gear Hobbing Machine. Generates precision spur, spiral, and bevel gears, face gears, worm gears, and worms. Speed, feed, and indexing each can be selected independently. *Consider that!*



YAK! YAK! YAK!

We won't yak about it here, but we *will* supply you with full information

FREE

if you will write for

BULLETIN No. 2429

ADDRESS

THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A *Hamilton Tool* USE IT WITH CONFIDENCE

2429

For more details circle **NED-123 C7** on enclosed inquiry slip

B.F.Goodrich

FREE TIRE AND WHEEL ANALYSIS
can cut costs, increase efficiency

Quiet, cushioned efficiency! *These new electric sit-down trucks run quickly and quietly through the aisles of this big Food Fair warehouse. Smooth Tread DeLuxe Cushion Pressed-On tires help cushion fragile food loads, prevent damage, speed up handling.*

Get a FREE TW ANALYSIS!

Would you like to save up to 50% on tire costs, and as much as 20% on maintenance expense? The B. F. Goodrich Tire and Wheel Analysis Plan has helped many companies, large and small, realize these savings. This free service points out which tires are right for your materials handling jobs. The right tires on your equipment can mean immediate savings. Just mail the coupon. A consulting service is available to manufacturers of materials handling equipment.

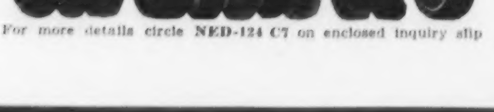
B. F. Goodrich Tire Company,
A Division of The B. F. Goodrich Co.
Department TW628, Akron 18, Ohio

Please send me additional information on your Tire and Wheel Analysis Plan

Name__________
Company__________
Street__________
City________ Zone____ State____

B.F.Goodrich FIRST IN RUBBER

Specify B. F. Goodrich tires when ordering new equipment



For more details circle **NED-124 C7** on enclosed inquiry slip

A modern truck for modern plants

The **Hydro*Lectric***

with most modern features

- 2 Drive Wheels instead of one
- 2 Braking Systems available instead of one
- 4 Wheel Stability instead of three
- Alloy Gear Transmission instead of chains
- 100% more Steering Ease —Greater Maneuverability
- 50% less Maintenance —Easy Accessibility
- Finger-Tip Control —Greater Safety

Put these modern features to work for you, greater profit at no additional cost.

Write for Catalog No. 65

STUEBING Designed • Engineered • Built

LIFT TRUCKS, INC. / CINCINNATI 14, OHIO

THERE IS A TRUCK FOR EVERY PURPOSE TO HANDLE ANY KIND OF MATERIAL.

For more details circle NED-126 C7 on enclosed inquiry slip

MICRON-GRINDING speeded!

STURTEVANT MICRONIZER* GRINDING MACHINES REDUCE PARTICLES TO MICRON SIZES AT RATES FROM ½ LB. TO 3000 LBS. PER HOUR . . . WITH NO ATTRITIONAL HEAT

NO MOVING PARTS! Particles grind each other. High speed rotation and violent impact are caused by jets of compressed air or steam. Centrifugal force keeps over-sized particles in grinding zone. Cyclone action in central section classifies and collects fines for bagging.

EASY TO CLEAN AND MAINTAIN! All seven sizes of Sturtevant Micronizer* Grinding Machines are constructed for instant accessibility (typified by the "OPEN-DOOR" design in other Sturtevant equipment).

WRITE FOR BULLETINS on Sturtevant Micronizer* Grinding Machines and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

*Reg.

STURTEVANT

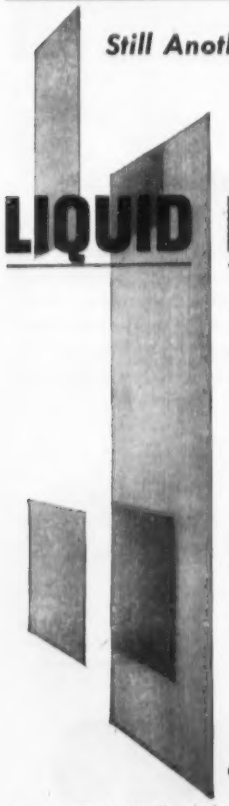
Dry Processing Equipment

The "OPEN-DOOR" to *lower* operating costs over *more* years

CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

For more details circle NED-127 C7 on enclosed inquiry slip

Still Another AMERICAN *First!*



WINDSOR FELTS FOR LIQUID FILTRATION

OUTLAST ALL OTHER FILTER MATERIALS 10 to 1

Windsor Felts are unique, fiber bonded, non-woven structures, engineered to serve as economical and efficient filter media for industrial processing. Quick facts:

- Greater product recovery
- Can be hosed off without taking from press
- Do not shrink, are ravel-free and produce clean-cut edges
- Easy cake release
- Can be re-used indefinitely
- Produce less plugging
- Reduce leakage
- Have unusual stability
- Temperatures to 250F

These outstanding properties make Windsor Felts highly suitable for use on plate and frame, pressure leaf, rotary vacuum, cartridge or specialty filters. Send today for Data Sheet #18—WINDSOR FELT-LIQUID FILTRATION, making request on your firm's letterhead.

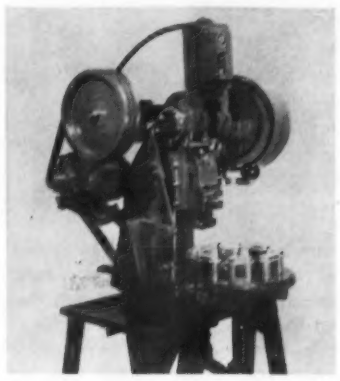
American Felt Company

TRADE MARK

GENERAL OFFICES: 62 GLENVILLE ROAD, GLENVILLE, CONN.

For more details circle NED-128 C7 on enclosed inquiry slip

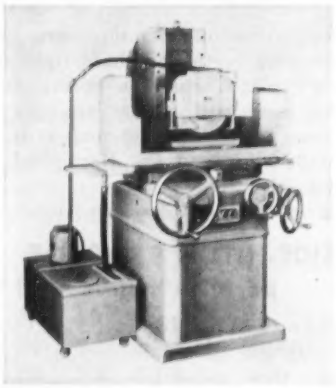
METAL MARKING PRESS has eight-station dial feed



Powered by ⅓-hp 220-v three-phase motor through a belt drive, model S-4K power press will mark metal parts with up to twelve ⅛-in. characters. Press has an eight-station dial feed, automatic discharge, and requires only feeding by operator. It is tripped by means of hand lever located a safe distance from ram and dial. Specifications include a ¾-in. stroke, 6-in. die space and a 4-in. throat. Speed with back gear is 60 rpm. Press can be converted for various stamping operations by applying interchangeable station studs for each shape of part to be marked. Made by **Geo. T. Schmidt, Inc.**, 1800 Belle Plaine Ave., Chicago 13, Ill.

For more details circle NED-129 C7 on enclosed inquiry slip

SURFACE GRINDER for die block and toolroom work



Large capacity No. 17 hand feed surface grinder is particularly adapted to die block and general toolroom work. Elevating handwheel is located below table level so that both point of wheel contact and handwheel graduations are simultaneously in view of operator. Table is actuated by timing belt drive, and only 2¾ turns of handwheel moves it the full 16 in. Wear-resistant hard-chrome table ways and permanently lubricated ball-bearing spindle directly driven by 2-hp 1750-rpm motor are featured. Conversion to wet grinding can be accomplished by adding a pump and tank unit. Made by **Covel Mfg. Co.**, Dept. 734, Benton Harbor, Mich.

For more details circle NED-130 C7 on enclosed inquiry slip

Variable Pitch Drives

Browning Mfg. Co. — Complete specifications on single groove wide range variable pitch sheaves and variable pitch locking ring sheaves in both single and two-groove types are given in 12-page catalog V-183-A. Engineering information and tables of practical stock drive combinations for easy selection are also provided.

For more details circle NED-131 C7 on enclosed inquiry slip

SAFETY YOUR RESPONSIBILITY

THIS DEPARTMENT HAS WORKED **DAYS** WITHOUT A LOST TIME INJURY

THE BEST PREVIOUS RECORD WAS **DAYS**

DO YOUR PART HELP MAKE A NEW RECORD

A CONSTANT REMINDER OF DAYS WORKED WITHOUT A LOST-TIME INJURY.

WRITE FOR BULLETIN NO. 82

Maintain Daily Interest in your Plant Safety Record!

IPCO SAFETY SCOREBOARD

20" wide by 30" high . . . 20 gauge metal baked dulux finish . . . green background with white letters. Blocks in special blackboard finish so that they may be changed with chalk from day to day.

IPCO *Safety Equipment for all Industries*

INDUSTRIAL PRODUCTS COMPANY

2807 N. Fourth St. • Philadelphia 33, Pa.

For more details circle NED-132 C7 on enclosed inquiry slip

SUPEREAM

REAMERS IN DECIMAL SIZES

470 REAMERS ARE CARRIED IN STOCK VARIATIONS OF .001

▼ Sizes from .032, .033, .034, .035, .036, etc., all the way up to .501. Any size required larger than .501 . . . blanks can be ground to your exacting specifications, delivered in 3 or 4 days. By purchasing SUPEREAM Reamers in steps of .001 you SAVE time, labor and money in the cost of extra machining and lapping.

▼ SUPEREAM Reamers all have ground and polished flutes and are held within .0002 tolerance. Reamers are also furnished in Right-hand spiral, Right-hand cut, as well as Left-hand spiral, Right-hand cut. These are delivered in 3 to 4 days.

Write for descriptive literature and prices

TWENTIETH CENTURY MANUFACTURING CO.

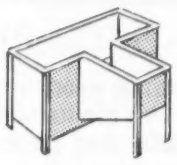
Box 429-ND Libertyville, Illinois

For more details circle NED-133 C7 on enclosed inquiry slip

MORE PRODUCTION ENGINEERS are turning to *Sta-Warm* for SPECIALIZED ENGINEERING to help solve their compound melting problems

Here are 5 steps to follow for improving your compound melting installation:

1. Ask for Engineering Analysis by Sta-Warm
2. Receive Recommendation Report from Sta-Warm
3. Order specialized compound melting equipment from Sta-Warm, if required
4. Enjoy simplified "package" installation
5. Profit continuously from satisfactory performance at pre-determined costs.



No obligation. Start with step 1 today, by writing to

STA-WARM ELECTRIC CO.

130 N. Chestnut St. • Ravenna, Ohio

Sta-Warm

ENGINEERED EQUIPMENT for melting and dispensing heated compounds

For more details circle NED-134 C7 on enclosed inquiry slip

FLOOR MAINTENANCE with the

PEDSO METHOD

(Plastic Emulsion Dry Sweep Only)

PLASTIC FINISH

TOP SKID RESISTANCE

NO THICK, BLACK TRAFFIC MARKS

No damp mopping

No buffing . . . EVER

Apply . . . dry sweep daily . . . that's all

Just familiar simple steps

1. Strip with CINDET

Get all wax off.
It's easy with Cindet

2. Mop application—

2 thin coats of NOFALS
Hard gleaming plastic finish
No buffing at all!

3. Dry Sweep with MOPWHYTE treated cloth or mop

It's magic the way dirt adheres
A cinch to wash clean

THAT'S ALL FOR 6-8-10 WEEKS
DON'T WORRY ABOUT BUILD-UP AT BASEBOARDS
IT'S A BREEZE TO STRIP WITH CINDET

For full information write to: DOLGE

WESTPORT, CONNECTICUT

For more details circle NED-135 C7 on enclosed inquiry slip

FIBRE-METAL

Monarch® FACE SHIELDS

. . . give you EVERYTHING for safety and long life!

COMFORTABLE AS AN OLD HAT, this Monarch® F-300 Face Shield gives you ALL that Fibre-Metal's long and successful experience in designing and engineering really practical protection can deliver. It is economical because of Fibre-Metal's large and efficient production equipment and methods. You get more because of its comfort and durability . . . and versatile safety uses! Maximum safety to eyes and face bring peace of mind, better and more profitable workmanship. Be sure your face protection is by FIBRE-METAL!

SEND FOR BULLETIN NO. 41

THE FIBRE-METAL PRODUCTS COMPANY
CHESTER, PENNSYLVANIA

THE WORLD'S LARGEST MANUFACTURER OF SUPERIOR PROTECTIVE EQUIPMENT

▲ For more details circle NED-136 C7 on enclosed inquiry slip ▲

HALLOWELL®

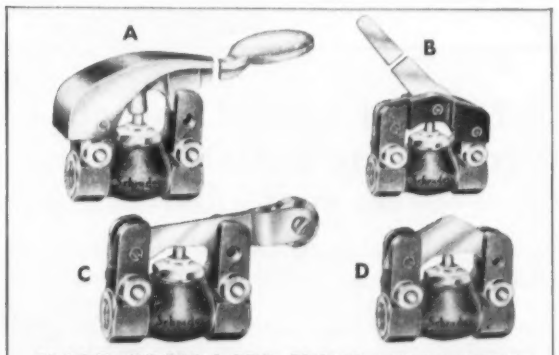
SOLID STEEL COLLARS

Size-marked for quick identification in 43 stock sizes

And these precision-machined solid steel collars stay put because they are held in place on the shaft by the famous UNBRAKO Self-Locking Socket Set Screw. Authorized industrial distributors carry complete stocks in sizes from 1/8" to 3" inclusive. Write for Bulletin 868. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
HALLOWELL POWER TRANSMISSION DIVISION — sps — JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-137 C7 on enclosed inquiry slip ▲



MORE COMPACT! MORE VERSATILE!

NEW Schrader® 2-and 3-way air control poppet valves

Interchangeable actuating levers bring new flexibility to these sturdy, space-saving air control valves. A single unit can now be quickly adapted to cam, roller tripper, or manual actuation. The compact body provides easy application of these valves to all types of air controls.

This new series features a specially designed brass body with 1/4" ports and convenient "in-line" mounting holes. Air flow capacity is 70 cubic feet per minute, at 100 psi inlet pressure. Shown above: A) hand lever, B) hand lockdown lever, C) roller lever, D) solid angle lever types. Write for free Schrader catalog.

A. SCHRADER'S SON
Division of SCOVILL
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

▲ For more details circle NED-138 C7 on enclosed inquiry slip ▲

WINCH HOIST
lifts up to 2 tons

Loads up to 2 tons can be handled double-line with model 404WX Cadillac winch hoist which weighs about 13½ lb. Hoist is equipped with 25 ft of 15/64-in. galvanized preformed aircraft wire rope with breaking strength of 5880 lb. This allows lift or pull of 12 ft double-line or 25 ft single-line. Single-line capacity is 1 ton. Overload safety factor is 100 per cent. Made by **Aluminum Products, Inc.,** Dept. H, Box 1462, Ft. Lauderdale, Fla.

▲ For more details circle NED-139 C7 on enclosed inquiry slip ▲

TILTING DRUM MIXER
used to tumble small metal parts

Originally designed for mixing concrete, this electric-powered tilting drum mixer has been adapted for tumbling of small brass and stainless steel parts. Mixer's 7 cu ft drum will clean, smooth and polish 500-lb lots of lock washers, snap rings, O-rings and C-rings, then discharge them into containers. Finely ground corncob put in the drum speeds cleaning by absorbing oil film present on parts. Drum is coated with auto undercoating to reduce noise. Made by **Speed King Mfg. Co.,** 615 Dublin Ave., Columbus 16, O.

▲ For more details circle NED-140 C7 on enclosed inquiry slip ▲

AUTOMATIC FOLDER
for letters, folders or bulletins

Improved model CV Premier Auto-Folder now has an automatic, electrically powered conveyor-stacker which is basically a scaled down adaptation of commercial type folding equipment. Operated by continuous duty alternating current motor, folder handles paper sizes from 9½ x 15 in. to 2½ x 4 in. Capacity is 15,000 pieces per hour, depending on size of letter, invoice, bulletin or circular to be folded. Entire mechanism is driven by Gilmer timing belt drive and uses no gears. Folder, with automatic stacker, sells for $149.95. Made by **Martin-Yale Co.,** Dept. 12, 2100 W. Fulton St., Chicago 12, Ill.

▲ For more details circle NED-141 C7 on enclosed inquiry slip ▲

PRESSURE Measurement ACCURACY 0.1%

W&T PRECISION DIAL MANOMETER, FA-145

Ranges: All ranges from 0-120 inches water through 0-300 inches Hg. in two revolutions — 45 inch scale.

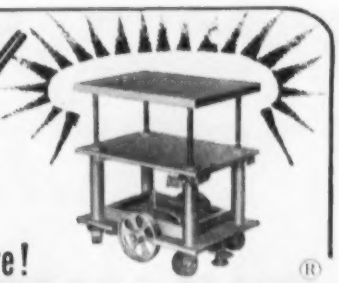
Write today for Publication No. TP-30-A

A-96-r

WALLACE & TIERNAN INCORPORATED
25 MAIN ST., BELLEVILLE 9, N. J.
In Canada: Wallace & Tiernan, Ltd., Toronto

▲ For more details circle NED-142 C7 on enclosed inquiry slip ▲

NOW More stamina, more versatile performance than ever before!



PORTELVATOR®

The Handy HAMILTON Portable, Elevating Table

NEW NEW convenience in maneuvering! Six wheel models roll easier . . . turn shorter. provision for increasing table area!

NEW NEW provision for raising and lowering overhanging loads! overhanging conveyor tops!

NEW FREE LITERATURE illustrates and describes all! Write for Bulletin P-5606. Address, The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

5606 IT'S A Hamilton Tool — USE IT WITH CONFIDENCE

▲ For more details circle NED-143 C7 on enclosed inquiry slip ▲

65 types in four stock models

Dependable Ohmite Amrecon general-purpose relays have proven their exceptional ruggedness and long life in years of service. Some models are particularly adapted to applications where severe shock and vibration are present. Others are of the sensitive type. Ohmite can assure you immediate shipment of 65 stock units and good delivery on the many made-to-order relays. Available in current ratings up to 25 amp, AC or DC, with varied contact arrangements; hermetically sealed or dust-protective enclosures.

Write on Company Letterhead for Catalog No. R 11.

OHMITE Manufacturing Company
3620 Howard Street, Skokie, Illinois (Suburb of Chicago)

Be Right with OHMITE®
RHEOSTATS • RESISTORS • RELAYS • TAP SWITCHES

▲ For more details circle NED-144 C7 on enclosed inquiry slip ▲

Automatic TRANSPORTER
LEADS ITS FIELD IN COMPACTNESS ...EFFICIENCY...ECONOMY

The above TRANSPORTER definitely improved handling of finished parts for Rockwell Mfg. Co., makers of valves and meters. Automatic TRANSPORTERS are available in many types...low and high lift platform and pallet models...forks, straddle and retractable mast type stackers...tractors. These short compact trucks combine all the advantages of electric power with many operating advantages exclusive with Automatic...perform all functions of standard rider-type trucks yet cost less. Write for information including lease or purchase plans.

Automatic® 61 W. 87th St., Dept. C7, Chicago 20, Illinois

WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

For more details circle **NED-145 C7** on enclosed inquiry slip

SHEEHAN
METAL BELT PRESS CONVEYORS
fit most every stamping transfer operation

No slippage, due to oil and grease with SHEEHAN'S positive drive spike pulley. Where belt replacements are high with rubber and fabric belts due to sharp edges, grease and oils, SHEEHAN'S metal belts give as much as 10 times longer life. Many rubber belts cost more than SHEEHAN'S metal belts.

Hundreds in use showing great savings in large and small stamping plants.

Long life with trouble-free operation.

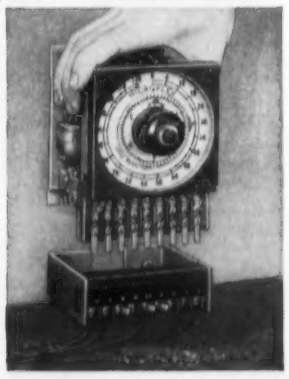
Write for literature and names of users.

R. T. SHEEHAN CO.
PLYMOUTH, MICHIGAN

For more details circle **NED-146 C7** on enclosed inquiry slip

NOW... quick plug-in connection with

Microflex Reset Timer



Terminals are all in a row . . . so you can quickly and easily adapt this timer to plug-in connection. Microflex Plug-In Kit is available in all accepted variations. In addition, you can rotate the terminal panel for rear connection just by loosening 2 screws — no rewiring. Ideal timer **for machine control.** Accuracies obtainable to 1/60 second. Over 150 timer operating combinations, plus a wide range of long or short time periods. Write for FREE AUTOMATION BOOKLET and Bulletin 110, Dept. NED-357.

EAGLE TIMERS SAVE TIME . . . SAVE MONEY

EAGLE
SIGNAL CORPORATION
Industrial Timers Division
MOLINE, ILLINOIS

For more details circle **NED-147 C7** on enclosed inquiry slip

ELECTRIC HAND DRYERS
line is redesigned and restyled

Redesigned, restyled line of Sani-Dri electric hand dryers affords such inside improvements as dynamically balanced motor on resilient mounting for smoother, quieter operation. Blower and heating unit deliver more cubic feet of warm, dry air per minute, with 33⅓ per cent reduction in current consumption. Plastic push bar, which starts machine, insulates user from any chance of electrical shock. Drying cycle can be adjusted with Airflex timer for either hand or hair drying. Five models in production include new wall, semirecessed and dual pedestal-mouted models. Made by **Chicago Hardware Foundry Co.,** 3501 Commonwealth Ave., North Chicago, Ill.

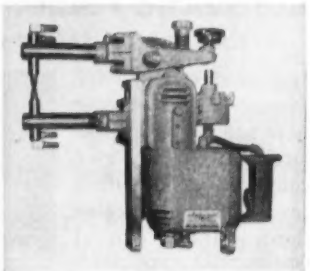
For more details circle **NED-148 C7** on enclosed inquiry slip

NAMEPLATE DECALS
water applied type adhere instantly

Water applied Type I nameplate decals adhere instantly and permanently to any commercial surface, including such "problem surfaces" as acrylics, polyethylene and unpainted metals. They do not depend upon water solubility for adhesion, and accidental oversoaking does not affect adhesion qualities. Nameplate designs can utilize colorful halftones or can be in simple poster style. Made by **Meyercord Co.,** Dept. NE8, 5323 W. Lake St., Chicago 44, Ill.

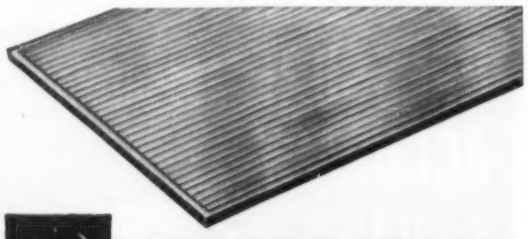
For more details circle **NED-149 C7** on enclosed inquiry slip

PORTABLE SPOT WELDER
unit is water cooled, air powered



Base of the model 57 portable resistance welder has provision for bench mounting, or it can be purchased with a metal cabinet stand and operated by a foot valve. Unit is water cooled and air powered. The air valve can be removed and operated anywhere by foot, hand or by cams, levers or other mechanical means. Electrical operation by solenoid is also possible. Welder has a moisture resistant transformer. It requires 200-240 v, 50-60 cycles single phase ac, 60 psi minimum air and minimum of 20 gph of water. Rating is 4.5 kva 3-v open circuit secondary. Standard 6 in. deep throat with 1½-in. tip opening can be adjusted to 18-in. throat depth. Arms are adjustable to 11½-in. opening. Made by **Ampower Products Co.,** Dept. NED, Box 464, Oak Lawn 70, Ill.

For more details circle **NED-150 C7** on enclosed inquiry slip

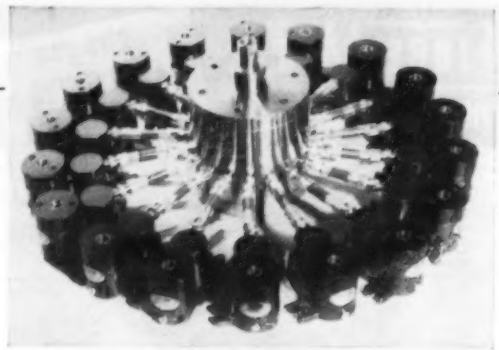


WEDGE-WIRE
ASK US FOR DATA
Kleenslot
SCREENS ARE
Versatile

By versatility we mean that our products are used in all types of mining and industrial fields including chemistry, food, petroleum, coal preparation plants, steel mills, etc. Wedge Wire Screens are served in practically every type metal available from stainless steel to aluminum and are non-clogging and non-blinding in principle. The aperture openings are absolutely perfect and precision made to your specifications. Our Engineering Department can save you money, time and expense with their suggestions. Merely write them and include blueprints, if possible, but specifications are necessary. You will receive a prompt reply. The V shaped diagram in the signature of this ad shows the operation of the famous Wedge Wire KLEENSLOT Screen.

Wedge-Wire CORPORATION
GAS STREET AT NICKLE PLATE R. R., WELLINGTON, OHIO

For more details circle **NED-151 C7** on enclosed inquiry slip



REDMER
AIR CHUCK and ROTARY VALVE for FAST, MULTIPLE PRODUCTION

Redmer #000 Air Chuck Mounts on all standard makes of rotary tables 16" in diameter or over. Can be used on tables 24" or over with standard REDMER chucks for greater holding power. Safely holds round, square or hex pieces. Using standard B & S Type collets eliminates fixture making.

Rotary valve available with required number of outlets and necessary off and on positions. Manufactured to specifications only as to diameter, height required and number of outlets.

Send for complete details, price list and complete catalog of all REDMER chucks.

REDMER AIR DEVICES INC.
Guntersville • Box NED • Alabama

For more details circle **NED-152 C7** on enclosed inquiry slip

UNION

HIGH LOADS and LOW LOADS can be handled at the same time and with consistent reliability by one UNION Miniature Relay with HI-LO contacts. (Photo enlarged 2½ times.)

UNION Miniature Relay, actual size.

New HI-LOW Contacts make one UNION Relay do two jobs!

Now you can use *one* UNION Miniature Relay for both high-level and low-level circuits. A new contact material handles high loads of two amperes or low dry-circuitry loads with consistent reliability. Formerly, two separate relays were required for these applications.

The new HI-LO contact material provides optimum contact resistance for both high-level and low-level loads. This means you can frequently save the cost of buying two different types of relays . . . and inventory expenses are much less.

You can get all standard UNION 6-pole and 4-pole Miniature Relays with HI-LO contacts. They meet or exceed specification Mil-5757-C and are available in DC or AC models. Write for Bulletin 1012 on UNION Miniature Relays.

See our exhibit at the I.R.E. Show, March 18-21, Booths 2122-2124.

GENERAL APPARATUS SALES
UNION SWITCH & SIGNAL
DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY
PITTSBURGH 18, PENNSYLVANIA

For more details circle **NED-153 C7** on enclosed inquiry slip

Aget offers more! Over 38 standard Dustkop models to choose from . . . *Plus* engineering service to help you select, provide, and install the proper accessories and fittings to complete your dust collecting system. Write for illustrated folder . . . Today!

AGET MANUFACTURING COMPANY
1396 E. CHURCH STREET • ADRIAN, MICHIGAN

▲ For more details circle NED-154 C7 on enclosed inquiry slip ▲

It's what's **IN** these wheels
That brings **OUT** big, new time-savings

A COMPLETELY NEW SLANT ON ABRASIVE APPLICATIONS

You can't tell by this picture that these Brightboy Wheels are compounded with RUBBER AND ABRASIVE (ALUMINUM OXIDE or SILICON CARBIDE) to cut finishing time tremendously — to BURR, CLEAN, FINISH, POLISH, frequently in ONE OPERATION! But the action of the rubber and abrasive quickly *shows you* a finish that's often the final polish—a one-step operation never before associated with abrasive applications. STOCK NUMBERS JOB-MATCHED TO YOUR NEEDS. Ask your dealer for the Brightboy Catalog listing grains, textures, machine speeds, work suggestions. Write us if he cannot supply you or on any problem in which finishing is involved.

WELDON ROBERTS
Brightboy
RUBBER CUSHIONED ABRASIVES

BRIGHTBOY INDUSTRIAL DIVISION • WELDON ROBERTS RUBBER CO.
95 North 13th Street Newark 7, N. J.
America's Pioneer Manufacturer of Rubber Bonded Abrasives

▲ For more details circle NED-155 C7 on enclosed inquiry slip ▲

FOR ACTIVE RECORDS . . .

Multiple Flex-Site Racks house up to 10,000 records within arm's reach . . . make all binders operate as easily as one. Mobile stands are available for racks and cabinets.

N-333-DI

DIEBOLD
FLEX-SITE
VISIBLE BINDERS

For faster, easier and more economical record handling, use Flex-Site Visible Binders. There are 4-ways to signal records for special attention and follow-up. Either top or bottom margins may be exposed. Two-way shift provides for instant removal and addition of records. Flex-Site is spill-proof, and can be carried into conferences and warehouse. Get the facts. Ask for PROOF of Flex-Site superiority on large and small record systems.

Diebold®
INCORPORATED
1008 Mulberry Rd., S. E. • Canton 2, Ohio

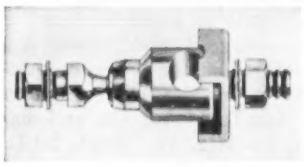
▲ For more details circle NED-156 C7 on enclosed inquiry slip ▲

SCREW CONVEYOR COMPONENTS
equipped with ball bearings

Low starting friction and free rolling action result from use of ball bearing-equipped components on new or existing Link-Belt screw conveyors. Components include: quick-change Quik-Link conveyor screw; single and double ball bearing trough ends; ball bearing hangers; ball and roller bearing enclosed countershaft ends; and enclosed single-reduction helical Motogear. Countershaft ends and Motogears can be used to solve drive-end space problems. Specifications of all units are found in 6-page illustrated folder 2489. Made by **Link-Belt Co.**, Dept. NED, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-157 C7 on enclosed inquiry slip ▲

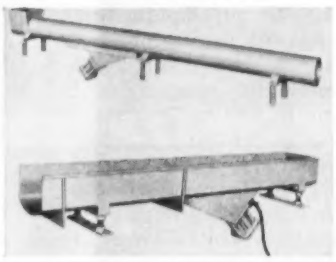
BALL JOINT
design resists 250-lb force



Location of the ball socket in the same unit as the cross drilled hole provides the type EC ball joint with maximum wall thickness. A short necked ball stud enables over 250 lb of force to be applied to the unit. It is assembled with a grease-resistant neoprene washer to cushion movement and maintain proper tension. A spring clip, permanently assembled with nut and lockwasher, allows rapid adjustment over an extended length. Made by **J. J. Tourek Mfg. Co.**, 1905 S. Kilbourn Ave., Chicago 23, Ill.

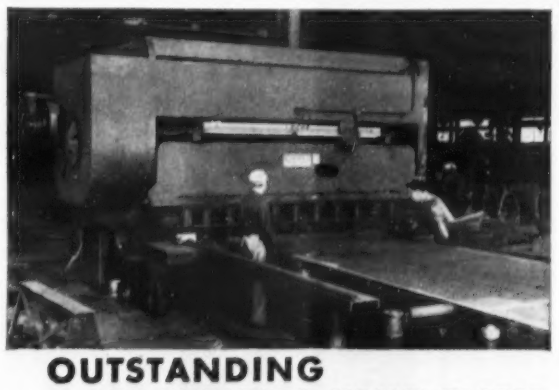
▲ For more details circle NED-158 C7 on enclosed inquiry slip ▲

VIBRATING FEEDER
is adjustable, air-operated type



Force generated by a pneumatic drive mechanism powers this vibrating feeder. A wide range of bulk materials such as sand, gravel, fine powders and small parts are fed at adjustable feed rates. Being constructed of metal and with sealed drive, equipment will operate successfully under conditions of high temperatures, corrosion and moisture or dirt. Some materials can be fed up inclines as great as 20 degrees. Feed rate is selected by varying air pressure in range of 30 to 90 psi. Feeders are available in pan, trough or tubular constructions, with a selection of lengths and feed rates to suit most needs. Made by **Cleveland Vibrator Co.**, 2744 Clinton Ave., Cleveland 13, O.

▲ For more details circle NED-159 C7 on enclosed inquiry slip ▲



OUTSTANDING
FOR SHEARING HEAVY PLATES

It is on heavy plates where the easy accurate cutting action of Steelweld Shears is really eye catching. With nothing more than a quick "oomph" the knife goes through the metal quickly and cleanly, seemingly without effort. The cut edges are straight and sharp.

For all gauges of metal, from the lightest to 1½", you will find Steelwelds superb.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

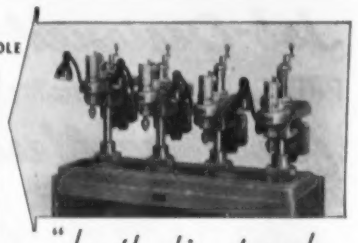
Send for free copy of catalog No. 2011.

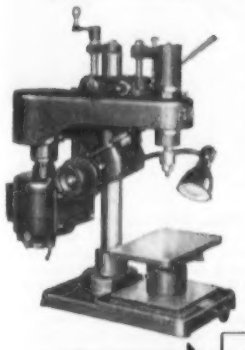
THE CLEVELAND CRANE & ENGINEERING CO.
6648 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

▲ For more details circle NED-160 C7 on enclosed inquiry slip ▲

HAMILTON
SUPER SENSITIVE, SMALL-HOLE
PRECISION
(REPEAT)
PRECISION
DRILLING MACHINES





"for the finest work you do"

Designed and built to *master* the heart-breaking jobs which so often are attempted on drilling machines of "standard" accuracy.

WE
WILL SUPPLY FULL INFORMATION
FREE
ASK FOR
BULLETIN NO. 2468

ADDRESS
THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A *Hamilton Tool*
USE IT WITH CONFIDENCE
2468

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You Name it
uni/RAP
has it

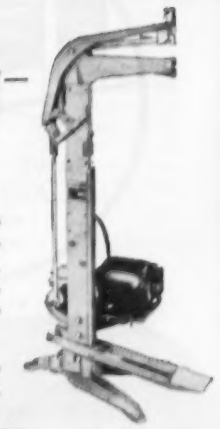
The most versatile and economical steam trap on the market. Request Bulletin 800D.

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N. C.
Baltimore—Camden, N. J.—Chicago—Cleveland—Los Angeles—New York—Providence—Montreal—Toronto

▲ For more details circle NED-162 C7 on enclosed inquiry slip ▲

BOTH HANDS FREE

to speed the work—
to fasten more securely—
BOSTITCH STAPLERS
foot or motor driven



Fasten faster, more securely at less cost. Use Bostitch foot or motor operated staplers in place of clips, glue, nails, pins, rivets, rubber bands, solder, string, tapes, tacks, thread or wire ties.

12 models with many interchangeable stapling heads to suit your work.

Fasten it better and faster with

Your Bostitch Economy Man has the facts, or write for bulletin to Bostitch, 683 Mechanic St., Westerly, R. I.

BOSTITCH
STAPLERS AND STAPLES

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Job-Designed!

PROTO Professional-Quality Pliers

for Your Needs!

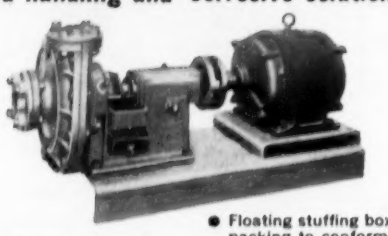
NEW! Multiple-Groove Joint Utility Plier. Gives you a wide range of openings for hundreds of jobs. 242-7½", 243-9½". ***NEW! Mighty Midget Pliers for Electronics.*** You'll like the feel of these pliers for working on small objects in tight places. 6 models, 4" to 4¾" long. ***NEW! "Snip-Grip" Plier.*** Plastic inserts in cutting edges hold end of wire after you cut it. Prevents electrical shorts, protects you from injury. 204T-4½", 206T-6". ***NEW! Electronics & Ignition Cutting Plier.*** Cutter is close to tip. Spring opens long narrow jaws. ***Also NEW! Comfortable "Handeze" Plier Grips.*** Slip on easily, fit tight, are long wearing. Reduce fatigue. ***NEW! V-Notch Wire Stripper.*** Two V-notches cut through insulation, slight side pressure strips it. 299-5⅛". ***And...the Sensational Multi-Plier!*** Increases grip 10 times! 234-8". For all PROTO pliers, see your dealer, or send 10¢ for catalog of entire line to **PROTO TOOLS** 5602
2205 Santa Fe Ave.,
Los Angeles 54, Calif.
Eastern Factory, Jamestown, N.Y.
Canadian Factory, London, Ont.

PROTO TOOLS
PROTO means PROfessional TOols

For more details circle NED-165 C7 on enclosed inquiry slip

OLIVITE ACID HANDLING PUMP

For acid handling and corrosive solutions...



- Will handle highly abrasive solutions.
- Locked on impeller.
- Removable and renewable corrosion resistant shaft sleeve.
- Floating stuffing box permits packing to conform to shaft movements, carbon seal with clear liquid wash.
- Either V-belt or direct drive.
- An efficient centrifugal pump and a durable chemical pump combined into one.

Write for Bulletin No. 308-R2

DORR-OLIVER
INCORPORATED
Stamford, Connecticut, U. S. A.

For more details circle NED-166 C7 on enclosed inquiry slip

The Amazing Tyler SPYRAL BLADE

SAWS ANY MATERIAL IN ANY DIRECTION...
up or down...
right or left...
even in circles!

Fits any standard hacksaw or coping saw frame. Leaves clean, smooth edge without chipping or tearing. Adapter sets available for Delta 14" bandsaws and all Do-All machines.

Hacksaw blades — 29c each in lots of 10 to 49 blades. Prices on larger quantities and other items on request.

See your industrial supply jobber... or write to:
TYLER MANUFACTURING CO. 1005 W. Arbor Vitae Ave. Inglewood, Calif.

For more details circle NED-167 C7 on enclosed inquiry slip

TUBE & PIPE NOTCHER

makes various notch configurations to form joints suitable for welding

Only seconds are required to notch the end of a pipe or tube on this Wallace-Pedi Notcher to make close-fitting joints suitable for welding. The compact machine is available in six models with from four to seven individual dies, depending upon size of material to be cut and capacity and size of machine. Operator inserts pipe or tube in the machine, steps on a pedal, and the end is notched in any required configuration. Dies are easily changed.

Six models have maximum capacities from 1 to 4 in. OD for maximum wall cuts of 0.080 to 0.220-in. One model is manually operated and others are powered by 1 to 4-hp motors. Floor space requirements range from 20 x 20 in. to 36 x 44 in. Made in Hanover, Germany, by Franz Diekmann Co. and distributed by **Wallace Supplies Mfg. Co.**, Dept. NED, 1304 Diversey Pkwy., Chicago 14, Ill.

For more details circle NED-168 C7 on enclosed inquiry slip

COMMERCIAL OSCILLOSCOPE

has full-scale amplitude-measuring range of 1 mv to 500 v in 17 steps

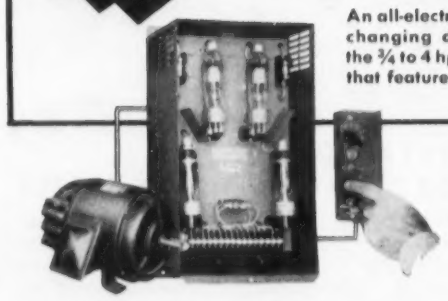
Capable of reading directly the microvolt output of strain gages, pressure pickups, accelerometers and other transducers without preamplification, type 403 oscilloscope has a full scale amplitude measuring range from 1 mv to 500 v. It is capable of resolving a 20-mv signal. Easily read lettering, handy control knobs and logical grouping of controls are features. Front panel controls permit selecting 19 accurately calibrated linear sweeps from 0.5 seconds per cm to 0.5 microseconds per cm.

Both driven and recurrent sweeps are available with automatic beam-brightening during trace time. On driven sweep operation, beam is brightened only when sweep is triggered, permitting the shutter of recording camera to be left open without fogging the film while awaiting the sweep. Bias supply compensates for variations in power line voltages and ambient temperatures. Made by **Allen B. Du Mont Laboratories, Inc.**, 750 Bloomfield Ave., Clifton, N. J.

For more details circle NED-169 C7 on enclosed inquiry slip

RELIANCE V★S DRIVE Jr.

An all-electric speed changing drive, in the ¾ to 4 hp. range, that features:



- 30 to 1 Speed Range
- Finger Tip Control
- Unlimited Speed Changes
- All Electric—from A-c. Circuits
- Low Cost

Write for Bulletin D-2102. D-1539-A

RELIANCE ELECTRIC
AND ENGINEERING COMPANY
DEPT. 243A, CLEVELAND 17, OHIO • CANADIAN DIVISION: WELLAND, ONTARIO
Sales Offices and Distributors in Principal Cities

For more details circle NED-170 C7 on enclosed inquiry slip

GET THIS BRAND-NEW CATALOG ON NICKEL ALLOY TUBING

FREE!

Here is the complete story on nickel alloy tubing in a 20-page booklet that provides quick, convenient reference for design engineers. Vital data on nickel and nickel alloys—including advantages, uses, chemical and mechanical properties, available sizes, and how to select proper tubing for a given application.

Nickel alloy tubing produced by Superior normally falls within the size range of .010" to ⅝" OD. Some alloys are also available ranging as high as 2½" OD x .025" wall. High-strength nickel alloys are hard and ductile. They offer designers and manufacturers high corrosion and heat resistance, plus good fabricating quality and excellent physical properties at elevated temperatures.

FOR YOUR FREE COPY OF CATALOG 12, WRITE TO

Superior Tube
The big name in small tubing
2018 Germantown Ave., Norristown, Pa.
All analyses .010" to ⅛" OD—Certain analyses in light walls up to 2½" OD

For more details circle NED-171 C7 on enclosed inquiry slip

PHILPLUG
SCREW ANCHORING COMPOUND

FIXES L-O-O-S-E SCREWS EVERYWHERE
and ANCHORS SCREWS TO HOLD FIXTURES SECURELY in SOLID or HOLLOW WALLS

IN SOLID WALLS
Use PHILPLUG alone in solid walls of brick, tile, concrete — any masonry material!

IN HOLLOW WALLS
Insert a PHILSTOP ahead of PHILPLUG in hollow walls of plaster, tile, plywood, etc.!

No more wobbly clamps and conduits — hooks and fixtures! PHILPLUG fixes loose screws firmly — cuts maintenance costs to a minimum! Costs less than 1¢ per hole. Simply put PHILPLUG into worn screw hole and insert screw. PHILPLUG forms a firmly molded thread from which screws may be easily removed or replaced!

And it's the fastest, most efficient way to attach fixtures — indoors and out! PHILPLUG is an Asbestos, Cementatious Compound that is impervious to moisture and becomes part of material to which it is applied. Holds immediately! In 3 sizes at all Hardware Stores and Industrial Supply Houses. Write today for FREE sample and literature.

NEW ENGLAND CARBIDE TOOL CO., INC.
55V Commercial St. Medford, Mass.

For more details circle NED-172 C7 on enclosed inquiry slip

Freeport **INDUSTRIAL**
BROOMS • BRUSHES • MOPS

- Guaranteed top quality workmanship and material.
- We maintain a staff of skilled engineers to develop cleaning tools for your special requirements.
- Immediate shipments.

There's a FREEPORT tool for every need. Brushes-Brooms-Mops-Dusters-Window Dryers-Floor Squeegees- Brushes and Brooms built to specification-Cylinder Brushes refilled. Ask for the FREE Catalog.

ORDER DIRECT FROM FACTORY —ONE BROOM OR A CARLOAD!

FREEPORT MANUFACTURING CO.
ESTABLISHED 1921
ADAMS & CLARK STREETS • FREEPORT, ILLINOIS

For more details circle NED-173 C7 on enclosed inquiry slip

New Plastic Material! Repairs Floor Cracks!

A new plastic material formulated for the specific purpose of repairing floor cracks and preventing surface deterioration is announced by The Monroe Company, Inc., Cleveland.

Before After

Known as "Jiffy Floor", it is a fine granular, ready-to-use plastic product that can be applied without interfering with production or traffic. It readily fills hairline cracks, shallow holes, spalled floors or expansion joints. Immediately after application, it will withstand heaviest loads.

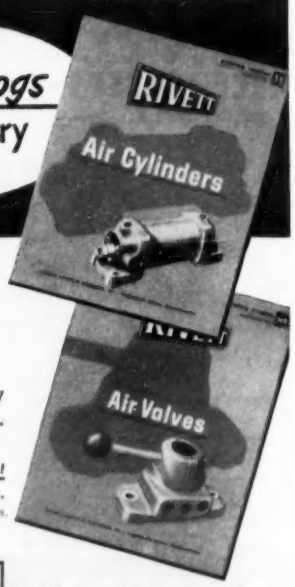
Jiffy Floor contains no asphalt, cement, sand or gravel. It will not crack, crumble or curl . . . is not affected by temperature changes . . . can be applied indoors or out.

Jiffy Floor is waterproof, dustless, skid-proof and noiseless. Available in 5-10-30 and 55-gallon drums, ready for easy use. For further information, write *The Monroe Company, Inc., 10707 Quebec Avenue, Cleveland 6, Ohio.*

For more details circle **NED-174 C7** on enclosed inquiry slip

HANDY AIDS FOR AIR CIRCUITS

Free Catalogs for your library



24 pages of Engineering Data, Specifications and Working Drawings.

Easy to use—Simplify your circuit problems.

SEND FOR YOUR COPIES TODAY!

RIVETT LATHE & GRINDER, Inc.
Dept. NED3, Brighton 35, Boston, Mass.

RIVETT furnishes a complete power package

For more details circle **NED-175 C7** on enclosed inquiry slip

for dependable, trouble-free control of "hard-to-hold" fluids . . . .

SPECIFY HOMESTEAD Lever-Seald VALVES

they provide sure shut-off . . .

ARE STICK PROOF . . . OPERATE INSTANTLY

Positive, drop-tight seal and instant, stick-proof operation are assured by the exclusive Homestead Lever-Seald mechanism. This powerful lever-and-screw device not only presses the valve's tapered plug firmly into its seat to form a drop-tight seal, but also provides a positive means of relieving seating pressure to permit easy operation. Because all operating parts and seating surfaces are protected in open and closed positions from line fluids, long, dependable, trouble-free service is doubly assured.

If "hard-to-handle" fluids are your problem, specify Homestead Lever-Seald Valves for your next installation or as replacements. We make them in metals and alloys to specification in sizes 1¼" to 12", pressures from vacuum to 1500 lbs.; temperatures from 40° below zero to 1100°F. Dry seat, or pressure gun lubricated optional.

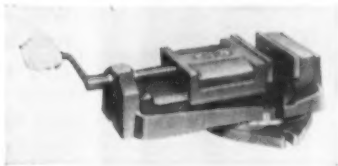
Send for details and copy of VALVE REFERENCE BOOK No. 39-3.

HOMESTEAD VALVE MANUFACTURING COMPANY

P. O. Box 84 "Serving Since 1892" Coraopolis, Pa.

For more details circle **NED-176 C7** on enclosed inquiry slip

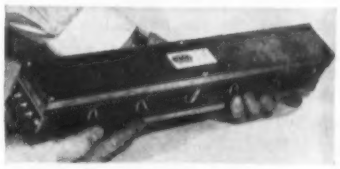
MACHINE VISE
maximum jaw opening is 8 in.



Coolant run - off trough and bronze nut for large main screw are features of Low-Boy model P-3 heavy duty machine vise. All working surfaces are ground, and solid bottom slide precludes chip clogging. Jaw width is 8½ in. Removal of steel jaw plates increases maximum jaw opening from 6¾ in. to 8 in. Weight is 194 lb. Made by **Universal Vise & Tool Co.,** 12 Nedo St., Parma, Mich.

For more details circle **NED-177 C7** on enclosed inquiry slip

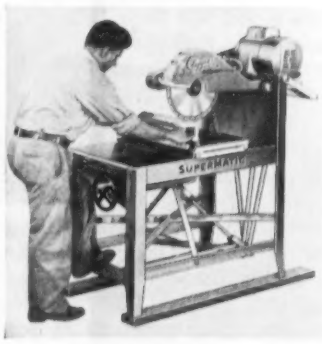
DELAY LINE
total delay is 300 microseconds



Addition to standard line of lumped-parameter electrical delay lines is the type 4D92 unit with a total delay of 300 microseconds, ±1 per cent. It has taps available every microsecond, or multiples thereof, and features a maximum attenuation of 4 decibels and delay-to-rise-time of 75 to 1 over its entire range. Maximum rise time is 4.0 microseconds and impedance is 1000 ohms, ±5 per cent. Use of ferrite core construction makes possible a 16⅝ x 2 11/32 x 2 15/16-in. open type housing. Made by **Underwood Corp.,** Electronic Computer Div., 35-10 36th Ave., Long Island City 6, N. Y.

For more details circle **NED-178 C7** on enclosed inquiry slip

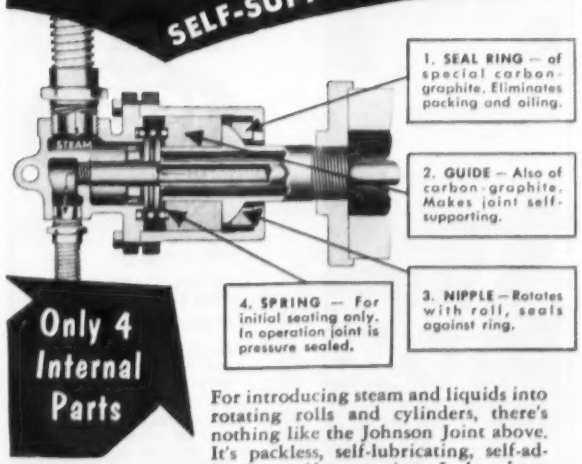
MASONRY SAW
control wheel keeps head level



Cutting head of the Supermatic wet or dry masonry saw is kept level, ready to cut at any height by the Hi-Lo control wheel. Control also sets head so operator cannot cut through the conveyor cart or damage the blade. All adjustments are made automatically. Head is powered by G-E 2-hp continuous duty motor which delivers up to 6¼ hp. Saw can be quickly converted to a light duty concrete saw and a track saw. Frame extensions can be added to increase saw width up to 6 ft to cut sills, copings and large stone and masonry units. A Wheel-A-Bout kit, including retractable wheels and handles, is offered as an accessory. Made by **Clipper Mfg. Co.,** Suite 205, 2800 Warwick, Kansas City 8, Mo.

For more details circle **NED-179 C7** on enclosed inquiry slip

JOHNSON Rotary Pressure JOINT
SELF-SUPPORTING TYPE



Only 4 Internal Parts

For introducing steam and liquids into rotating rolls and cylinders, there's nothing like the Johnson Joint above. It's packless, self-lubricating, self-adjusting, self-supporting. It has been adopted by dozens of machinery makers, and is finding new uses every day.

Type SB shown handles both steam and condensate through same head; also available for through flow service, and in sizes and styles for all operating conditions. *Write for literature.*

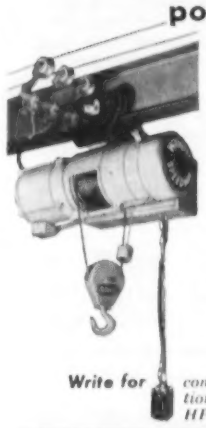
The Johnson Corporation

812 Wood St., Three Rivers, Mich.

For more details circle **NED-180 C7** on enclosed inquiry slip

ACCO products The WRIGHT Hoists for Dependability

NOW! a 2-Speed Frame 1 Hoist permits precise, gentle positioning of work



Compare the advantages of this WRIGHT Frame 1 Electric Hoist with other types—

2 Speeds • A fast lifting and lowering speed—and a slow speed (1/4 the rate of the fast speed) for precise, gentle positioning of work—accomplished by use of 1800/450 RPM motors.

Flexibility • Travel on rail or jibs is limited only by the availability of electrical service.

Service Availability • Failure of power source is quickly and easily remedied for individual electric hoists.

Maintenance • Little maintenance required and this is easily handled on WRIGHT Hoists.

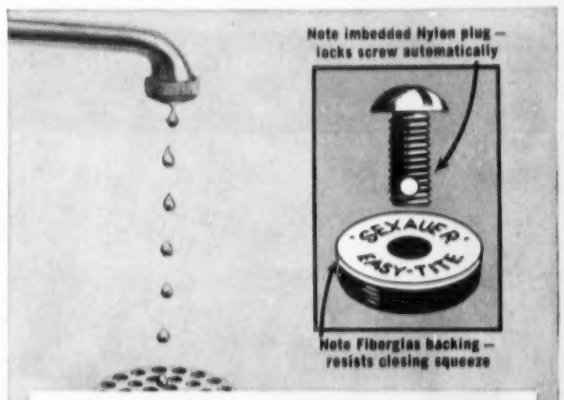
Write for *complete information on this sensational new WRIGHT 2-Speed, Fractional HP Motor Wire Rope Electric Hoist*

ACCO Wright Hoist Division AMERICAN CHAIN & CABLE

York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

Better Value

For more details circle **NED-181 C7** on enclosed inquiry slip



Why Faucets Leak

...9 out of 10 washers are fastened with TOO LONG or SHORT ...screws. The screws QUICKLY LOOSEN, thus loose washers ...are destroyed thru grind and squeeze of opening and ...closing faucets.

34 years of research uncovers new solution

...Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws, ...with an imbedded expanding NYLON PLUG, lock at the ...required depth AUTOMATICALLY—hold washers FIRMLY!

...Made of rustproof, non-corroding MONEL, heads don't ...twist off or screw slots distort. They are easy to remove ...when necessary, can be used over and over.

...Used with NEW 'Sexauer' EASY-TITE faucet washers, this ...combination outlasts past faucet repairs "6 to 1"! EASY-...TITES are made of super-tough, pliable du Pont compound ...(neither rubber nor fiber) and reinforced, like a tire, with ...a vulcanized layer of Fiberglas, they resist distortion and ...splitting from shut-off grind and squeeze.

The hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, STOPPING just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS—LABOR—and *costly* FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

J. A. Sexauer Mfg. Co., Inc. Dept. AU-37
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

My name ..... Title .....
Company or Institution .....
City ..... Zone ..... State .....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle **NED-182 C7** on enclosed inquiry slip

Now a wide selection of

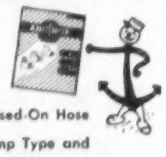
ANCHOR

S.A.E. Straight Thread "O" Ring Boss Adapters

They're new

— and especially designed for use with the new S.A.E. Boss. Anchor S.A.E. Straight Thread, "O" Ring, Boss Type Adapters insure positive, leak-proof connections. The positive "O" Ring seal eliminates the need for excessive tightening — therefore removing the danger of thread distortion, and cracking and distorting of valve body seats—common causes for leaks. Proper positioning of hoses is conveniently accomplished, avoiding twisting strains. They may be removed and re-installed many times without impairing efficiency. Anchor's new S.A.E. Boss Type Adapters are now available in a large range of sizes and in quantities to satisfy your needs. Dimensional diagrams, cross-sectional views and engineering data on these new S.A.E. Adapters are given in the new Anchor Catalog No. 202 — write for your copy.

Andy Anchor says:
Catalog No. 202 also gives you engineering data on the broad line of Anchor Adapter Unions, Adapters and Pipe Fittings.



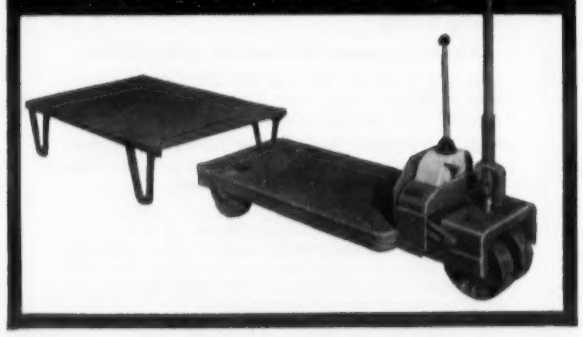
Also ask for
Catalog No. 100 — Anchor Pressed-On Hose Assemblies.
Catalog No. 301 — Anchor Clamp Type and Reusable Couplings.

ANCHOR COUPLING CO. INC.
352 North Fourth Street, Libertyville, Illinois
Branch Offices: Dallas, Tex., Plymouth, Mich.

For more details circle NED-183 C7 on enclosed inquiry slip

Put your troubles on the SKIDS . . .

with AMERICAN LOAD-LIFT TRUCKS



Gone are back bending and foot pumping—instead, an effortless 15-inch, push-pull arm motion lifts 6,000-pound loads! Gone are cornered loads, fumes, plant traffic headaches! Gone are your middleweight-moving troubles—when American Pulley's Load-Lift Trucks handle your pallets and skids.

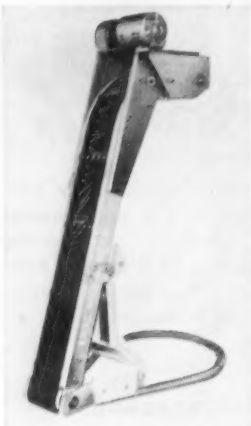
- **EASY** to use: with a balanced handle designed to pull at exactly the right angle, it rolls and turns easily and smoothly under full load.
- **SAFE**: there are no flying handles—the operator is out of the aisle while raising the load, and there's no back-breaking bending.
- **EFFICIENT**: there's full power in every stroke of the lifting handle.
- **RELIABLE**: good design and workmanship are hallmarks of all American Pulley Products.

There are distributors in most localities who stock American Load-Lifts to handle every standard pallet and skid.

The American Pulley Company
MATERIALS-HANDLING DIVISION
4294 Wissahickon Ave. • Phila. 29, Pa.

For more details circle NED-184 C7 on enclosed inquiry slip

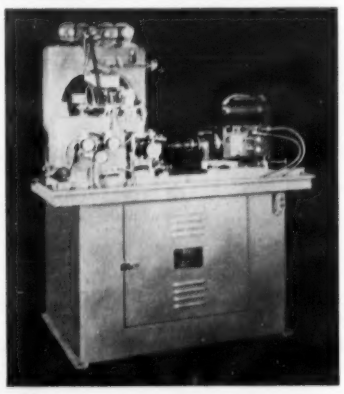
MAGNETIC ELEVATOR-CONVEYORS in 4 to 12-ft lengths



Wide variety of small ferrous items can be magnetically and automatically elevated by Models 31SN12 and 31SN6 permanent magnetic elevator-conveyors. Latter model is slightly heavier duty. Built of heavy-gage heat treated aluminum alloy sheet, these Magna-Movers are only 8 in. wide. The 6-in. wide Goodrich belt is drawn over a band of Alnico V permanent magnets by 1/3-hp motor mounted at the top. Incline angle is adjustable from 60 to 90 degrees. Standard models are available in 4 to 12-ft lengths, in 1-ft increments. The 4 and 5-ft models are offered with or without tubular stand. Belt speed, normally set at 85 fpm, can be varied by changing V-belt and sheaves. Variable speed motors can also be furnished. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie 6, Pa.

For more details circle NED-185 C7 on enclosed inquiry slip

DRILLER & TAPPER hopper-fed unit makes concentric holes automatically in round parts



Long rivets, electrical terminals and other similar headed parts are automatically drilled and and tapped at high production rates on this model 408 Beco machine. Equipped with long-shank hopper feeder, it will accommodate shank lengths from 3/8 to 3 3/4 in. and shank diameters from 0.09 to 0.375-in. Accurate positioning and secure clamping of work assure concentric, straight, axial holes.

Automatic self-reversing tapping attachments, removable coolant tanks for change from drilling to tapping operations and speed of 400 strokes per cu ft of free air are features. Machine operates on 65 to 100-psi air under electric solenoid control. Tool and hopper are driven by individual three-phase motors. Production of 30 pieces per minute, drilled 7/16-in. deep in steel, or double that in brass or aluminum is possible. Tapping speed is 50 per cent faster than drilling. Made by **Batchelder Engineering Co.**, Drawer 159, Springfield, Vt.

For more details circle NED-186 C7 on enclosed inquiry slip

The New SCHERR MICRO-PROJECTOR with the VERTICAL design

NEW 1957 SELF CONTAINED IMPROVED MODEL

FEATURING

- ✓ RIGID FLOOR BASE - ELIMINATING EXTRA CHARGE FOR TABLE
- ✓ TILTING STAGE FOR HELIX, ANGLES AND BEVELS
- ✓ 4" DIA. STAGE OPENING
- ✓ COLUMN SLIDE ADJUSTABLE FOR WEAR BY MEANS OF GIBS - WILL HOLD SQUARE INDEFINITELY.
- ✓ CUSTOM MADE PRECISION COATED LENSES & DOUBLE CONDENSERS FOR DIFFERENT OBJECTIVES 10 TO 100X MAGNIFICATION.
- ✓ AN ENTIRELY NEW PRACTICAL DESIGNED TOOL FOR INSPECTION DEPARTMENT AND PRODUCTION SHOP.

WRITE FOR ILLUSTRATED FOLDER

GEO. SCHERR CO., Inc.
COMPLETE LINE OF PRECISION INSTRUMENTS
200 ND LAFAYETTE STREET • NEW YORK 12, N.Y.

For more details circle NED-187 C7 on enclosed inquiry slip

RUST-GO STOPS RUST

and keeps it stopped

5 Rust-Fighting Ingredients in One Paint
• Gives you Maximum Metal-Protection

1. **Fish Oil** to penetrate surface rust
2. **Bakelite** for film-hardness
3. **Tung Oil** for waterproofing and flexibility
4. **Red Oxide** to resist sun's rays, weather and fumes
5. **Zinc Chromate** to neutralize and stop rust-creepage

RUST-GO is the complete metal-protective paint—Penetrates and neutralizes rust, gives lasting surface-protection.

For full details, color samples and technical data Write Dept. D-3

THE GARLAND COMPANY
Cleveland 5, Ohio

For more details circle NED-188 C7 on enclosed inquiry slip

R&S EVER-LOK®
Automatic Locking

RECEPTACLES • PLUGS
CORD
CONNECTORS

A Complete Line of Quality Grounding Types to Meet CODE REQUIREMENTS
2 Wire, 3 Pole • 3 Wire, 4 Pole

Meet code requirements and today's increased demand for grounding type units with R&S Ever-Lok plugs, receptacles and cord connectors.

Outstanding advantage of Ever-Lok is an automatic locking feature that grips fast and holds forever. No tug or pull will work it loose—yet it separates instantly with a finger-tip twist of the powerful bayonet type lock. Write for descriptive literature, EL-15 on all types of R&S Ever-Lok. E2

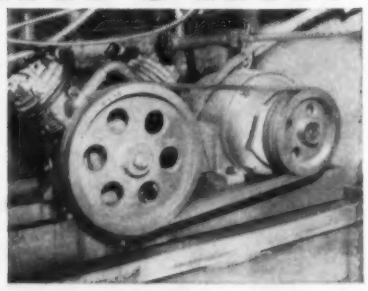
RUSSELL & STOLL COMPANY, INC. • 125 BARCLAY STREET, NEW YORK 7, N.Y.

RUSSELL & STOLL
PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1903

For more details circle NED-189 C7 on enclosed inquiry slip

TEAMWORK!

BROOK A. C. MOTORS AND YOUR COMPRESSORS



BROOK A. C. MOTORS provide a smooth flow of power to compressors regardless of climatic conditions. Brook Motors, 1 to 600 HP, cost less initially and assure maximum service life and overall economy. There is no finer motor built. They're powering air and gas compressors from Arabia to Wyoming, stacking up splendid performance records. There's a Brook Sales and Service Headquarters near you. Send for literature.

SINCE 1904

world's most respected motor

BROOK MOTOR CORPORATION
3553 W. PETERSON AVE., CHICAGO 45, ILL.

BROOK MOTOR CORPORATION

For more details circle NED-190 C7 on enclosed inquiry slip

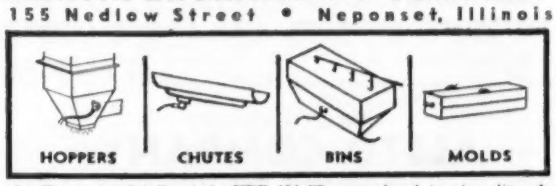
VIBROLATOR®

the strong silent type VIBRATOR

FOR MOVEMENT OF WET OR DRY MATERIAL

Only one moving part does the job — a rolling ball driven by compressed air or steam. Needs no oil or filters. The VIBROLATOR moves materials down chutes, out of bins and hoppers, actuates screens, brings up entrained air in wet plaster, concrete and granulars. Priced from $9 to $88 in malleable iron, (nonferrous in some sizes), from "pocket-watch" size to the 10 lb. DV-51. Write for complete catalog today.

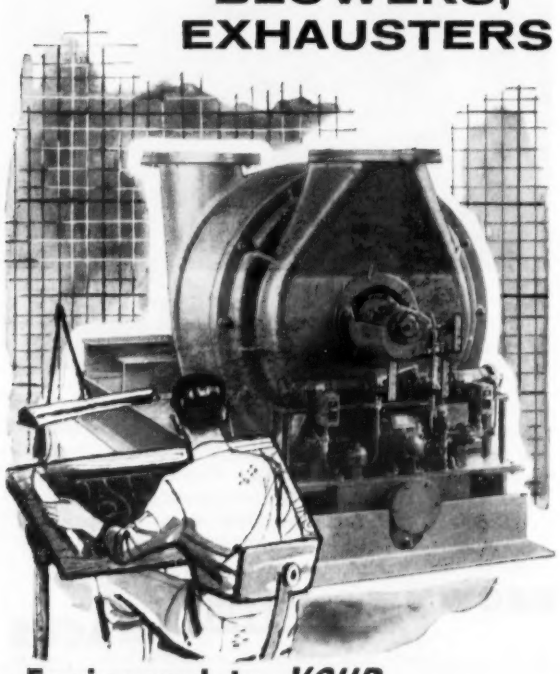
MARTIN ENGINEERING COMPANY
155 Nedlow Street • Neponset, Illinois



▲ For more details circle NED-191 C7 on enclosed inquiry slip ▲

LAMSON

BLOWERS, EXHAUSTERS



Engineered to *YOUR* Specifications • Application

Whatever your application, whatever your industry, you can depend on Lamson to engineer *low-maintenance, low-cost* Billmyre Centrifugal Blowers and Exhausters. Backed by over 50 years of sound, time-proved design, practical engineering and skilled workmanship, every unit leaving our plant is checked and double checked to insure its long life and your satisfaction.

From 100 to 25,000 C.F.M., from ½ to 500 H.P., in single or multi-stage design, Lamson Blowers and Exhausters deliver the right amount of clean, dry air or gas — without pulsation. Pressure or vacuum always remains nearly constant at all capacities . . . with H.P. proportional to actual volume delivered.

VALUABLE INFORMATION! CLIP TO YOUR LETTERHEAD

LAMSON CORPORATION
172 Lamson St., Syracuse 1, N.Y.
Plants in Syracuse and San Francisco
Offices in Principal Cities

Send me Bulletin B-7 describing the many advantages of Lamson Billmyre Blowers and Exhausters.
172

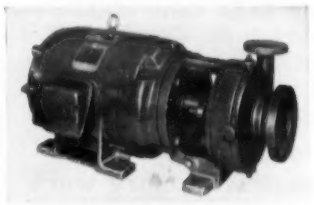
▲ For more details circle NED-192 C7 on enclosed inquiry slip ▲

LENS CLEANING STATION dispenses cleaner and tissues

Plunger - type spray-top 8-oz. bottle incorporated in this Eye Comfort and Safety lens cleaning station dispenses antifogging lens cleaning fluid. Single 5 x 9-in. optical tissues are available from two positions, and a receptacle for used tissues is provided. The 9 x 15½ x 4-in. unit is serviced through the front by a key lock. Lens cleaner and tissue refills are available. Made by **United States Safety Service Co.,** Dept. NED, 1215 McGee St., Kansas City 6, Mo.

▲ For more details circle NED-193 C7 on enclosed inquiry slip ▲

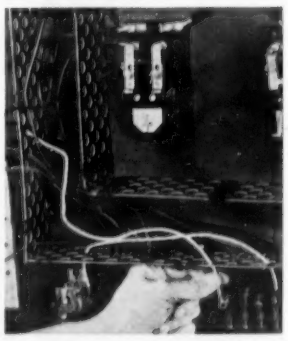
CENTRIFUGAL PUMPS capacities up to 600 gpm



Line of GSC general application close-coupled centrifugal pumps comprises seven models with capacities up to 600 gpm and heads up to 275 ft. Pumped liquids can range in temperature from −40 to 250° F. Available in bronze-fitted, all iron and all bronze constructions, pumps provide a removable back head for removal of impeller without disturbing the piping. Large cradle opening gives free access to the stuffing box, and stuffing box is adaptable to packing or mechanical seal. Made by **Dean Brothers Pumps Inc.,** 321 W. Tenth St., Indianapolis 7, Ind.

▲ For more details circle NED-194 C7 on enclosed inquiry slip ▲

WIRING DUCT is three-sided plastic type



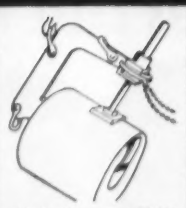
Fabrication and assembly costs in production of control panels can be minimized through use of Glastic Channel-Duct, now available in a 2-in. high size as well as previously announced 3-in. size. Wires are laid in the glass-reinforced polyester duct, then strung through holes to the nearest connection points before the cover strip is snapped on. Duct is easy to shear and mount and does not require mitered corners. It meets UL requirements for flame retardance to 105° C and minimum dielectric strength of 5000 v. Made by **Glastic Corp.,** 4321 Glenridge Rd. near Green, Cleveland 21, O.

▲ For more details circle NED-195 C7 on enclosed inquiry slip ▲

Dixon ONEMAN COIL GRABS

COST LESS...increase efficiency & safety

Coil Grab—up to 5,000 lbs. cap., 1" to 24" widths



Coil Handler—up to 35,000 lbs. cap., 18" to 48" widths

Coil Hook—up to 1,000 lbs. cap., ¼" to 6" widths

Model No.	Max. Coil Wgt. - Cap.	Width Stock Handled Min.	Width Stock Handled Max.	Radial Cap. Stock Hldg. Min.	Radial Cap. Stock Hldg. Max.
COIL GRAB					
A-10	1,000 lbs.	1"	4"	3½"	13"
A-20	2,000 lbs.	2½"	9"	3½"	12"
A-35	3,500 lbs.	7"	16"	4"	12"
A-50-12	5,000 lbs.	4"	12"	7"	24"
A-50-24	5,000 lbs.	10"	24"	4"	10"
COIL HANDLER					
M-30	15,000 lbs.	18"	30"	8"	16"
M-36	15,000 lbs.	24"	36"	8"	16"
M-48	15,000 lbs.	24"	48"	8"	16"
COIL HOOK					
H-10-6	1,000 lbs.	¼"	6"	1"	13"

Dixon *Write* for FREE Literature
AUTOMATIC TOOL, Inc.
2302 23rd AVE. • ROCKFORD, ILLINOIS

▲ For more details circle NED-196 C7 on enclosed inquiry slip ▲

LARGE OR SMALL / SHORT OR TALL

Electroline Fittings

ARE THE CHOICE OF ALL

There's an Electroline Wire Rope Fitting to suit your every need. Actual tests have proved their great holding power in all applications, regardless of size or type.

Electroline Fittings are installed easily and safely with ordinary tools—by unskilled labor in a matter of minutes—without the danger of molten metal or acids—without blow torches or special tools.

To give you the whole story of Electroline Wire Rope Fittings, we have prepared a pocket-size illustrated catalog, filled with information of sizes and types. Why not send for your copy today?

Electroline COMPANY
4121 SOUTH LA SALLE STREET
CHICAGO 9, ILLINOIS
IN CANADA: POWERLITE DEVICES, LTD., TORONTO

▲ For more details circle NED-197 C7 on enclosed inquiry slip ▲

Instantly tests iron content in stainless steel welds

NEW *Ferritic* ELCOMETER

(pocket size)

This new precision instrument replaces time-consuming, destructive laboratory analysis. Enables you to make rapid, on-the-spot, non-destructive tests for iron content along welds.

Measures magnetic intensity. Operates on principle that increase of magnetic flux intensity between two soft iron test probes of a U-shaped magnetic circuit reduces the forces in a spring-loaded magnetic needle in a parallel magnetic branch.

Accurate readings in all positions. Needle locking device assures correct readings. Balanced in all planes. Sturdily constructed. Comes in tough leather case.

Write for illustrated folder

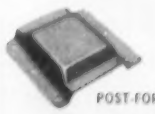
FERRO CORPORATION
4141 East 56th Street • Cleveland 5, Ohio

▲ For more details circle NED-198 C7 on enclosed inquiry slip ▲

A wide variety of parts can be quickly produced from Synthane Laminated Plastics

MACHINED

PUNCHED



POST-FORMED

One of the great advantages of Synthane laminated plastics is their ability to be readily machined.

You can saw, turn, mill, drill or punch them with ease. Many intricate parts can be produced by the molded-laminated and molded-macerated processes to save machining costs.

Industrial laminated plastics are our business and fabricating is our specialty. We may be able to save you time, material and delays.

SYNTHANE CORPORATION
N.E. River Rd., Oaks, Pa.

☐ Please send me information about Synthane Fabrication Service

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

▲ For more details circle NED-199 C7 on enclosed inquiry slip ▲

Time delays in automation circuits

Time / Delay / Relay

When automatic machinery and circuits must be timed with repetitive accuracy (from 0.1 second to ten minutes or more) you'll find a sure, reliable answer in AGASTAT electrically-actuated pneumatically-timed time delay relays.

The AGASTAT is
- light, versatile, dependable.
- unaffected by voltage variations.
- instantaneous recycling.
- available in models which offer delays on energizing and de-energizing, two-step delays, manually-actuated time delay switch, remote push button control.

***WRITE** our application engineers for help with your timing problem. Address Dept. A23-35*

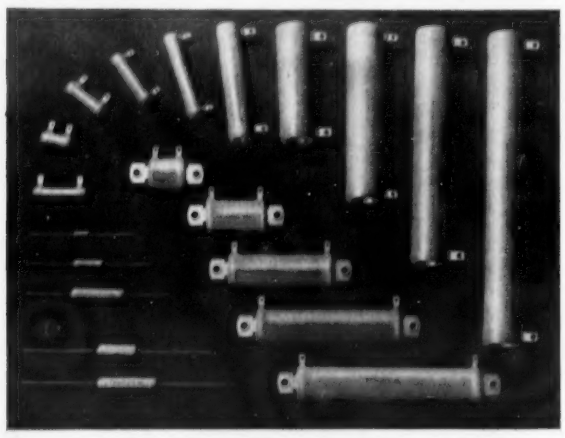
AGA DIVISION

Elastic Stop Nut Corporation of America

1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in pneumatic timing.

For more details circle **NED-201 C7** on enclosed inquiry slip

NOW! Vitrohm MIL-R-26C Resistors in all styles!



Famous Ward Leonard Vitrohm® vitreous-enameled resistors are now available in every style to meet all requirements of Military Specification MIL-R-26C.

What's more, this line offers you *all* characteristics—G, V, and the exacting Y—and *all* specification sizes and resistance values—even the highest values using the finest wire (0.00175").

Tab-terminal, axial-lead and stack-mounting types are available in styles and characteristics shown in table below.

For complete data on these MIL-R-26C resistors, write us for Bulletin 12. (And incidentally, for Vitrohm resistors to *highest commercial and industrial standards*, get W/L Catalog 15.) Ward Leonard Electric Co., 51 South Street, Mount Vernon, N. Y. In Canada: Ward Leonard of Canada Ltd., Toronto. 7.10

ENGINEERING DATA

TYPE	STYLE	AVAILABLE IN CHARACTERISTICS	RESISTANCE RANGE
Stack Mtg.—Tab	RW20 thru 24	G	All values in Spec.
Tab terminal	RW29 thru 47	V, Y* and G	All values in Spec.
Axial lead	RW55 thru 59	V and G	All values in Spec.†

*Characteristic Y applies to styles RW30, 33, 37 and 47 only. Characteristic Y is similar to V but requires high insulation resistance at end of moisture-resistance tests.

† Maximum values for single-layer-wound resistors with 0.00175" diameter wire.

LIVE BETTER...*Electrically*

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RESISTORS · RHEOSTATS · RELAYS · CONTROLS · DIMMERS

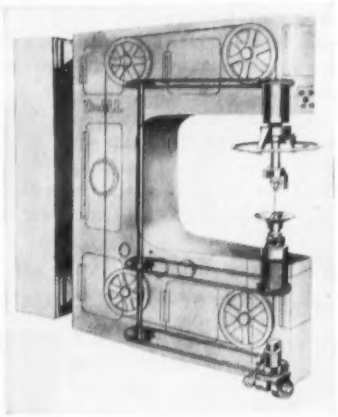
For more details circle **NED-202 C7** on enclosed inquiry slip

TELEVISION CAMERA for closed circuit telecasting

Built-in video operating controls which can be operated at the camera or remotely are features of the TK-15 simplified black-and-white television camera, suitable for closed-circuit telecasting. It has a vidicon pickup tube and meets requirements for a studio type monochrome camera for use in industrial, business or other fields. Design features include a 7-in. kinescope viewfinder, nonlinear optical focus for easy focusing of subject at any point in the camera viewing range, four-lens turret and self-contained variable gamma circuit for high quality gray scale rendition. Made by **Radio Corp. of America,** Broadcast & TV Equipment Dept., Camden 2, N. J.

For more details circle **NED-203 C7** on enclosed inquiry slip

CONTOUR SAWING MACHINE makes 14½ ft long straight cut by moving through stationary work



Work capacity of 70 sq ft and ability to make a straight cut 14½ ft long are features of the model 5 contour band sawing machine. Articulated construction enables the machine to move, rather than the work, when the workpiece is heavy, ungainly or unbalanced. Cutting and guiding mechanism is carried by a yoke housing all the parts for cutting and power feed.

Hinges with antifriction bearings connect the yoke, an intermediate member and the stationary member. The saw blade travels through the tubular posts which telescope for work thickness adjustment. Any movement of the top post is transmitted to the bottom post and feed wheel (on floor) through sprockets and chains (see phantom view).

Rubber-tired power feed wheel is driven by a torque motor and causes the entire yoke to move in the direction the saw blade is mounted. Force of the feed is rheostat controlled. Handwheel permits turning the saw blade 180 degrees in either direction, while work is supported on table. Made by **DoALL Co.,** 256 N. Laurel Ave., Des Plaines, Ill.

For more details circle **NED-204 C7** on enclosed inquiry slip

LEARN ABOUT Speedline STAINLESS STEEL FITTINGS

22 Illustrated Pages Tell You HOW and WHY SPEEDLINE FITTINGS
- Speed piping installation
- Simplify design and assembly
- Cut process piping costs!

Write for YOUR Speedline Fittings Catalog *Today* . . . it's the Biggest News in Process Piping in Years!

®SPEEDLINE is a registered Horace T. Potts Co. trademark.

Distributors are located in principal cities from coast to coast

Speedline® STAINLESS STEEL FITTINGS

manufactured by **HORACE T. POTTS COMPANY**
532 East Erie Avenue • Philadelphia 34, Pa.

For more details circle **NED-205 C7** on enclosed inquiry slip

LOW COST INDUSTRIAL INCINERATOR

New 10 bushel capacity burner provides safe and efficient outdoor refuse disposal at low cost. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing bits of paper. Intense combustion burns damp, green or dry refuse to fine ash in any weather. Minimizes smoke and smell. Needs no watching. Won't blow over. Ends refuse hauling and fire hazards. Safe for use within 10 feet from out buildings. Satisfaction guaranteed. Only $79.50—F.O.B. Cleveland Order today, price increases April 1st.

SPECIFICATIONS
- *Stands 5' high x 36" square at base—lifts off 10" high ash pan.*
- *10 bushel burning capacity.*
- *Made of Armco rust-resistant aluminized steel (molten aluminum bonded to steel).*
- *Complete with ash pan base and grate.*
- *Needs no auxiliary fuel.*
- *Shipped completely assembled —weight 165 lbs.*

OTHER SIZES AVAILABLE

ALSTO COMPANY
Dept. NE-3, 4007 Detroit Ave., Cleveland 13, O.

For more details circle **NED-206 C7** on enclosed inquiry slip

FLEXIBLE STORAGE

Independent and self-contained, they readily accommodate to changes in stock requirements. Easily relocated; no bolting. You get more into less space; you save time in storing and issuing with Brown Section Racks. Iron and steel construction. Can't burn, warp, sag. Never wear out. Eliminate safety hazards. Act now! Write for complete specs and prices on models and sizes. Brown Engineering Co., 129 N. 3rd Street, Reading, Pa.

BROWN QUICK-SERVE RACKS

For more details circle **NED-207 C7** on enclosed inquiry slip

TORQUE

applied by the inch ounce

Available in these Torque Ranges

MODEL	CAPACITY
F80-I-G	0- 80 inch grams
F8-I-O	0- 8 inch ounces
F16-I-O	0- 16 inch ounces
F32-I-O	0- 32 inch ounces
F80-I-O	0- 80 inch ounces
F160-I-O	0-160 inch ounces

Inch pound models and larger foot pound ranges also available

sent on request

P.A. STURTEVANT CO.
ADDISON QUALITY ILLINOIS

For more details circle **NED-208 C7** on enclosed inquiry slip

FOR HIGH QUALITY AND EASY INSTALLATION IN LIMITED SPACE

USE McGILL® Levolier® SWITCHES

Cut installation time and end frequent switch replacement with these Levolier switches for lighting and FHP motor control where space is limited.

No. 41—UNCONDITIONALLY GUARANTEED — Levolier Model 41 6 amp. "T" rated 125 volt switch is unconditionally guaranteed when used in lighting circuits. It is extremely compact—⅝" x 1⅜". Molded phenolic case.

No. 71—the thinnest 6 amp. "T" rated switch only 15/32" thick, 6 amp., "T" 125 volt; 3 amp., 250 volt. Pressure connected 6" leads for fast, easy installation. Phenolic case.

Available from Electrical Wholesalers

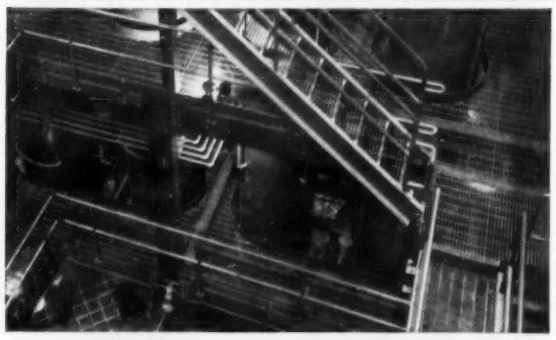
Send for Catalog No. 84

McGILL® ELECTRICAL SPECIALTIES

are always a little better and ALL *are Underwriters' Laboratories inspected*

McGILL MANUFACTURING CO., INC. 151 N. Campbell St. Valparaiso, Indiana

▲ For more details circle NED-209 C7 on enclosed inquiry slip ▲



GRATING

FOR EVERY PART OF YOUR PLANT

Tri-Forged Grating is made by forge welding triangular shaped cross bars to the bearing bars, thus forming a solid surface of one-piece construction.

Tri-Lok Grating is fabricated by forcing cross bars into alternating "J" slots in bearing bars. Triple-twist and turn lock assures long-lasting construction.

Readily available through Dravo Sales Offices and Distributors. For complete information, write to Dept. D-2503, Dravo Corporation, Machinery Division, Fifth and Liberty Avenues, Pittsburgh 22, Pa.

DRAVO CORPORATION

▲ For more details circle NED-210 C7 on enclosed inquiry slip ▲

BULLETIN CD-400

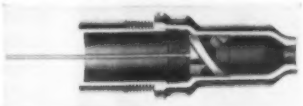
New COMPLETE SPECIFICATIONS CONE-DRIVE SHAFT MOUNTED SPEED REDUCERS

★ fractional to 13 hp
★ reductions from 5:1 to 60:1
★ readily motorized
★ feature Cone-Drive double-enveloping worm gear design for maximum load-carrying capacity in minimum size.

CONE-DRIVE GEARS DIV.
MICHIGAN TOOL COMPANY
7171 E. McNICHOLS RD. DETROIT 12, MICH.

▲ For more details circle NED-211 C7 on enclosed inquiry slip ▲

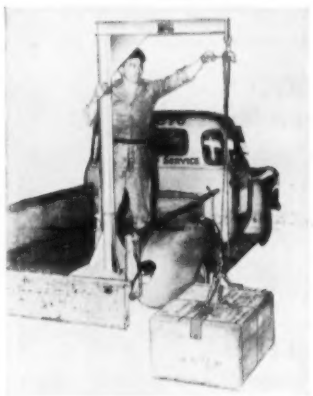
SPRAYING NOZZLE
pull-out vane simplifies cleaning



Vane of this Fulljet spray nozzle for hard-to-get-at places has a small female threaded connection to receive a pull-out rod which is installed by user in length required. Rod extends back inside the pipe to some connection point that is easily accessible. When cleaning is needed the vane is merely drawn back through the pipe, removed and cleaned while the nozzle itself is flushed out. Nozzle is offered in a range of sizes and capacities. Made by **Spraying Systems Co.**, 3211 Randolph St., Bellwood, Ill.

▲ For more details circle NED-212 C7 on enclosed inquiry slip ▲

ROTATING BOOM CRANE
for truck or dock use

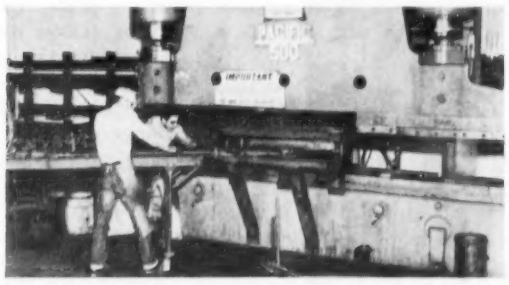


All-steel E-Z-Lift crane features an I-beam boom, heavy pipe mast, a lock bolt to restrain swing and a 10-ft lift on the hoist. Crane weighs about 135 lb and can be used on a truck as shown, plant loading dock or a marine dock to aid launching or docking of small craft. It rotates a complete circle. Price is $100, including hoist. Made by **Bacon Crane & Hoist Corp.**, 150 Broadway, New York 38, N. Y.

▲ For more details circle NED-213 C7 on enclosed inquiry slip ▲

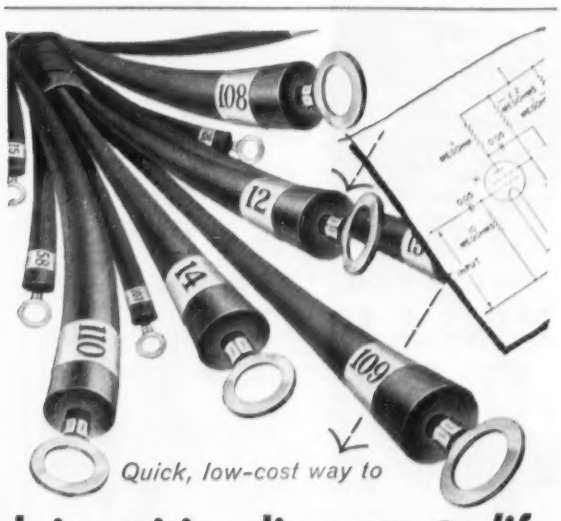
HYDRAULIC PRESS BRAKE
shears 1-in. high carbon steel

Shearing attachment for this hydraulic press brake makes it possible to cut heavy high carbon steel plate. Specially designed attachment production-



shears plate up to 1½ in. thick and 3 ft long. It adapts the press brake to work ordinarily performed on expensive shears. Brake and attachment made by **Pacific Industrial Mfg. Co.**, Dept. A, 848 49th Ave., Oakland 1, Calif.

▲ For more details circle NED-214 C7 on enclosed inquiry slip ▲



Quick, low-cost way to

bring wiring diagrams *to life*

BRADY *PERMA-CODE* WIRE MARKERS

- For any wire, any temperature, any application.
- Tell which wire goes where—for less than 1/8¢ per lead.
- Self-sticking — go on fast.
- Insure proper installation of your electrical system.
- Reduce down-time for repair or trouble-shooting.
- 1½" and ¾" lengths stocked by distributors in 160 cities.
- Over 2000 stock markers plus NEMA codes for immediate delivery.

Write for FREE SAMPLES you can use!

W. H. BRADY CO. 750 W. Glendale Ave., Milwaukee 9, Wis. Established 1914

▲ For more details circle NED-215 C7 on enclosed inquiry slip ▲

WHEN IT COMES TO NUTS

. . . SPECIFY "Fischer Turned" BRASS AND ALUMINUM NUTS

for PRECISION

Produced by *turning* on unique high-speed machinery, Fischer nuts cut assembly costs through faster starting . . . smoother, easier running . . . elimination of "blanks" or rejects.

for PRICE

You pay no premium for Fischer *precision-turned* nuts . . . they cost no more than those produced by other, less accurate methods.

for DELIVERY

Prompt delivery is assured by large stocks of standard types and sizes . . . "specials" are produced quickly and economically.

C-353 FS

Investigate the savings possible with Fischer-turned brass and aluminum nuts! Write today for Catalog No. 55 . . . or send specifications for price and delivery quotations.

TURNED NUTS Fischer SPECIAL MFG. CO. CINCINNATI OHIO SINCE 1908

Fischer SPECIAL MFG. CO.
461 Morgan St. • Cincinnati 6, Ohio

▲ For more details circle NED-216 C7 on enclosed inquiry slip ▲

Cleaner Air with Half the Filters

A large metropolitan library was using banks of two 1"-thick throwaway filters in series to clean intake air. But the surfaces quickly clogged with dirt, and operating costs became excessive.

Then, they tried PLIOTRON—the world's first truly washable, electrostatic, panel-type air filter.

They soon found single banks of PLIOTRON, 1"-thick—*only half the number*—cleaned the air better, did not clog and were easily cleaned for repeated use. That's because the unique filter medium of PLIOTRON carries a permanent, electrostatic charge that actually attracts and captures up to five times as many fine dirt particles. It also permits depth-loading rather than surface-loading, and maintenance of full efficiency by simple washing.

PLIOTRON can bring greater efficiency to any forced-air heating or air-conditioning system using panel filters. For details see your PLIOTRON Distributor. Or write Goodyear, P. O. Box 283, Akron, Ohio.

for cleaner air everywhere—

PLIOTRON AIR FILTER BY GOODYEAR

THE GREATEST NAME IN RUBBER

Pliotron—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle NED-217 C7 on enclosed inquiry slip ▲

THE MODERN WAY

To do all kinds of tacking and fastening jobs.

SAVE TIME STEPS MATERIALS

HANSEN ONE HAND TACKERS and STAPLERS

1001 USES
- PLASTIC DIAL PLATES ON RADIOS
- LOUDSPEAKER SILKS
- GASKETS TO REFRIGERATOR DOORS
- RUBBER DIES ON PRINTING ROLLS
- CELLOPHANE OR GLASSINE
- ASBESTOS BAFFLES IN RADIOS
- TOPS AND TRIM ON AUTOS

FASTER PRODUCTION — quality tacking and fastening — easy portability — one-hand operation — handy Take-up Jaw for quick accessibility and on-the-job servicing — are features that make HANSEN the "preferred" TACKER.

36 MODELS—80 STAPLE SIZES

EXTENSIVELY USED in industry for all types of tacking, fastening, assembly — HANSEN saves TIME — STEPS — MATERIALS — with its efficient, rapid one-hand operation. SUBMIT YOUR PROBLEM. GIVE DETAILS.

For BEST RESULTS use only genuine Hansen Staples in the BLUE BOX . . .

A. L. HANSEN MFG. CO. Request Booklet ...TODAY

5164 Ravenswood Ave., Chicago 40, Ill.

For more details circle NED-218 C7 on enclosed inquiry slip

ROCKET hammers reduce replacement costs

ROCKET Hammers are built to outlast all others in any kind of service, and are safer, too. Long-haul, they cost less for production or maintenance service.

Tubular boron alloy steel handle won't bend or break. Fully heat treated and chrome plated. Permanently locked to forged, highly polished head. Cushion grip soaks up shock, avoids fatigue, won't slip wet, dry, or in gloved hand.

Start saving now. Order trial ROCKETS for your shop. Available in all patterns and weights. Contact your mill or industrial tool supplier today. True Temper, 1621 Euclid Ave., Cleveland 15, Ohio.

FREE Industrial Tool Catalog

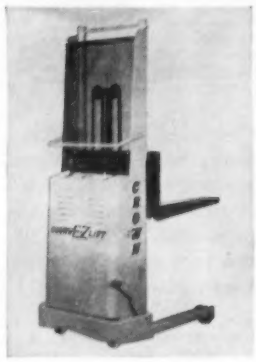
Send today for your copy of "TOOLS FOR INDUSTRY" — new catalog showing all True Temper tools designed expressly for industrial use. No obligation.

TRUE TEMPER®

Finest quality in Shears • Garden, lawn and farm tools • Shovels • Hammers, axes, hatchets • Fishing tackle • Golf-club shafts

For more details circle NED-219 C7 on enclosed inquiry slip

ELECTRIC HYDRAULIC LIFTS
1000 and 1250-lb capacity models



Compact, maneuverable E-Z Lift electrically operated hydraulic lift trucks are useful in narrow aisles or cramped areas. Powered by a 12-v system with built-in 110-v battery charger, the equipment can be furnished with remote controls. Models BL1250-56 will raise loads up to 1250 lb to any point up to 56 in. above the floor. Similar model raises same load to 66 in. Model BL1000-76 will raise 1000-lb loads to 76 in. above the floor. Other features are overload protection, roller bearing wheels and dual foot brakes. Made by **Crown Controls Co.**, 50 S. Washington St., New Bremen, O.

For more details circle NED-220 C7 on enclosed inquiry slip

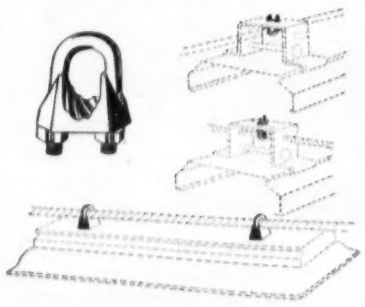
PIPE CRIMPING TOOL
utilizes compound leverage

Up to 20-gage galvanized steel can be worked by the model 500 compound leverage pipe crimper. It features 1¼-in. blades and makes two crimps each time its jaws are compressed. Pliable vinyl plastic hand grips with stop posts prevent hand slippage and provide finger clearance when working against a bench. Lightweight tool is Parco-Lubrized for corrosion protection. Spring tension opens the jaws after each crimp. Made by **Niagara Machine & Tool Works**, Northland Ave. & Chelsea St., Buffalo 11, N. Y.

For more details circle NED-221 C7 on enclosed inquiry slip

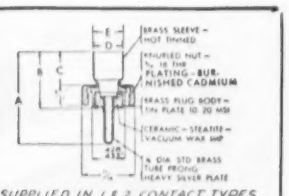
LIGHT FIXTURE HANGERS
support continuous rows on cable

Efficient, economical installation of fluorescent lighting fixtures in continuous rows on cable runs is possible with wire rope clips. Fixtures can be run lengthwise or crosswise, with clips attached to hangers or fixture channels. Rigid mounting is assured with minimum of ceiling supports. Wire rope clips are available in range of sizes from **Malleable Iron Fittings Co.**, Dept. P.H., Branford, Conn.



For more details circle NED-222 C7 on enclosed inquiry slip

Ideal for ANTENNA CONNECTIONS PHOTO-CELL WORK MICROPHONE CONNECTIONS



SUPPLIED IN 1 & 2 CONTACT TYPES

JONES SHIELDED TYPE PLUGS & SOCKETS

LOW LOSS PLUGS AND SOCKETS FOR HIGH FREQUENCY CONNECTIONS

For quality construction thruout, and fine finish, see diagram above.

101 Series furnished with ½", .290", 5/16", ⅜" or ½" ferrule for cable entrance. Knurled nut securely fastens unit together. Plugs have ceramic insulation; sockets bakelite. *Assembly meets Navy specifications*

202 Series Phosphor bronze knife-switch type socket contacts engage both sides of flat plug contacts — double contact area. Plugs and sockets have molded bakelite insulation.

For full details and engineering data ask for Jones Catalog No. 21

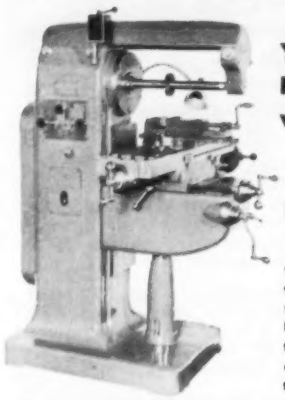
Jones HOWARD B. JONES DIVISION CINCH MANUFACTURING CORPORATION CHICAGO 24, ILLINOIS SUBSIDIARY OF UNITED-CARR FASTENER CORP.

See The Jones Display at the I.R.E. Show-Booth 2535

For more details circle NED-223 C7 on enclosed inquiry slip

WORLD WIDE Acceptance INDEX

YOUR ASSURANCE OF TOP VALUE!



You Get Peak Performance with an INDEX Model "60" HORIZONTAL MILL

• Simple, efficient, compact, with all operating parts enclosed, yet readily accessible. Unusually low-priced. Designed for the average tool room, yet highly suitable for production shops through its rigidity and low maintenance cost. Standard table 40" x 9", larger table optional.

The INDEX LINE also includes the Famous "SUPER 55" and the Popular "45" Vertical Mills

Write for Literature

INDEX MACHINE CO.

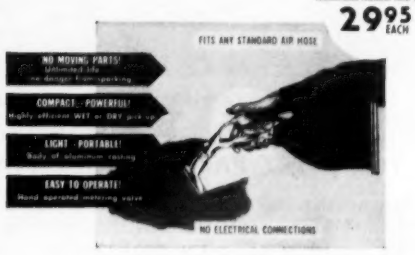
539 N. MECHANIC STREET JACKSON, MICHIGAN

For more details circle NED-224 C7 on enclosed inquiry slip

cut industrial cleaning costs!

Safe Industrial Cleaning with the M-M-A "Little Windy" Airvac (AIR-OPERATED VACUUM CLEANER)

COMPLETE UNIT WITH 5 ALUMINUM NOZZLE AND BAG 29.95 EACH



The "Little Windy" Airvac is safe! It is completely non-electrical. No danger from sparks — no moving parts.

Saves time and money! Cleans walls, shelves, bins, beams, lighting fixtures, electrical equipment, floor benches, etc.

Powerful suction developed by compressed air makes this unit unusually efficient for either wet or dry pick-up.

Special fittings, brushes, etc. make the Little Windy Airvac adaptable to most any industrial application. Interchanging bag with hose makes it adaptable for removal or transference of liquids.

M-M-A, Inc., Lancaster, Pa.

Write for further data and technical information

For more details circle NED-225 C7 on enclosed inquiry slip

ENTIRELY NEW LEVER PULLER

— positive friction brake holds load in any position

You have to see a Peerless Pal to appreciate its compactness. The ¼-ton unit is packaged in an attractive metal box with carrying handle. The container is also capable of holding a capacity-doubling snatch block. The ½-ton unit is only slightly larger.

Lift a load, lower a load, drag a load smoothly with the entirely new Peerless Pal Lever Puller. A true friction brake holds it safely in any position. The Peerless Pal is so light and compact that it can be carried in the palm of your hand. Fully enclosed construction, too, makes it ideal for use in shops, on trucks, on farms, in service stations, on the highway, around boats. Write for Bulletin P-40 today.

THE HARRINGTON COMPANY

Plymouth Meeting 16, Pa.

For more details circle NED-226 C7 on enclosed inquiry slip

Here's an Easier way to handle your Blueprints!

This new, wall-type

Martin Sheet File System

enables you to work with a large number of blueprints more efficiently and neatly because each sheet hangs flat. When not in use, the sheet hangers fold flat against the wall, resulting in a minimum of storage space. A unique feature is the new spring clips which hold sheets firmly and permit quick and easy removal of sheets at any time. For complete information on how a Martin File System can solve your blueprint problems,
Write to Dept. NED.

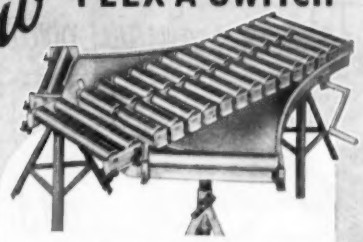
Units are available in 2 sizes, Model #30 at $49.50 holds sheets up to 30" wide, and Model #42 at $63.80 holds sheets up to 42" wide. Both sizes have a gray hammertone finish.

Fort Pitt Fixture Company
2056 W. LIBERTY AVE. PITTSBURGH 26, PA.

For more details circle NED-227 C7 on enclosed inquiry slip

3 WAY Flow "FLEX-A-SWITCH"

LEFT and RIGHT and THROUGH



ROLLERS are concentric at any setting to assure positive line of travel without guard rails. Can be used with curves and straight sections to distribute work in production or warehouse handling. Standard 11½"; 15"; 18" conveyor widths.

2 WAY Flow

Remote or manual control. Remote control illustrated at left.
WRITE FOR DETAILS

- LEFT & THROUGH
- RIGHT & THROUGH

METZGAR CONVEYOR CO.
416 Douglas St., N. W.
MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES
GRAND RAPIDS 4, MICH.

For more details circle NED-228 C7 on enclosed inquiry slip

EISLER

FOR 35 YEARS

We supply any part or complete equipment . . . Special turntables made to order

INDEXING TURNTABLES
MORE THAN 100 DIFFERENT TYPES

- FOR WELDING • BRAZING • SOLDERING • SPRAYING
- GLASS INSULATOR MELTING AND GLASS GLAZING with rotating stations and indexing with barrel cam or Geneva gear action.
- For work transferring, tilting positions. Motorized or hand operated.

Eisler Indexing Turntables are completely electrically controlled

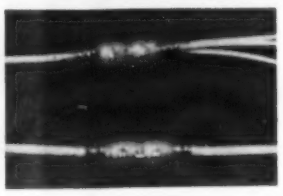
AND CAMS MADE TO YOUR SPECS!

Manufacturers' representatives wanted

EISLER ENGINEERING CO., INC.
740 SO. 13th ST., NEWARK 3, N. J.
Charles Eisler, Jr., President

For more details circle NED-229 C7 on enclosed inquiry slip

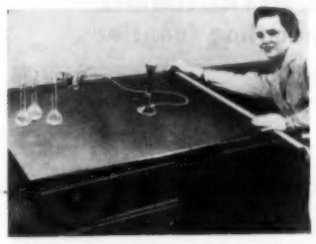
WATERPROOF SPLICE
insulated for multiwire use



Color-coded for size identification, Sealink permanent water-sealed and insulated splice accommodates AN wire sizes from No. 26 to No. 10. It is used as a two-wire splice or for multiwire applications and meets military specifications. Splice consists of a highly conductive, electrotinned copper link; transparent nylon insulation sleeve and anodized aluminum sealing rings. Installation is with ratchet type Hytool. Made by **Burndy Corp.**, Omaton Div., Norwalk 12, Conn.

For more details circle NED-230 C7 on enclosed inquiry slip

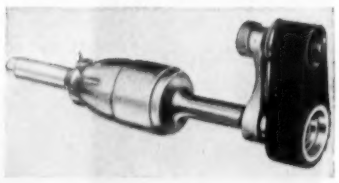
LABORATORY BENCH TOPS
extra depth adds work space



Four 30-in. front-to-back Formica bench tops for Fisher unitized laboratory furniture make extra work space available by eliminating the 7-in. deep splashback and reagent shelf. Fixtures are deck-mounted, coming up through the easily-drilled tops. Tops are made in 2, 3 and 4-ft widths and in a five-sided corner unit. Black tops have a drip groove in front; will not crack or splinter; and resist alcohol, boiling water, many solvents, alkalies and heat. Made by **Fisher Scientific Co.**, 376 Fisher Bldg., Pittsburgh 19, Pa.

For more details circle NED-231 C7 on enclosed inquiry slip

AIR MOTOR GRINDERS
12-lb model uses 6 or 8-in. wheel



Metal removal and buffing or polishing of castings, forgings and welds are uses for model 700 horizontal grinder, a 12-lb, 21½-in. long air-motor powered tool. Its Power-Seal motor will not stall under heavy loads or heat up under steady use. Operation can be at 4500 or 6000 rpm. Tool uses a 6 or 8-in. abrasive wheel and can be equipped with a safety lever valve control. An easily attached abrasive belt grinder head weighs 4 lb and uses a 4-in. diameter contact wheel and a 20 x 2-in. abrasive belt. Model 700-A right angle grinder can be used with a flexible disk. This unit weighs 13½ lb, operates at 6000 rpm and can use a 6-in. cup wheel. Made by **Airetool Mfg. Co.**, 308 S. Center St., Springfield, O.

For more details circle NED-232 C7 on enclosed inquiry slip

Powered by the press ram . . . independent of the die

3 SIZES. Cuts steel up to 3/32" thick.

3" WIDE $69 6" WIDE $95 12" WIDE $195

Guaranteed — money back if not 100% satisfied

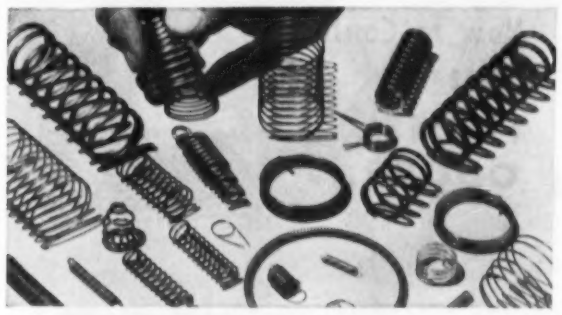
New LOW prices on the JACO AUTOMATIC STOCK REEL

WRITE FOR FULL DETAILS TODAY!

Dealer Inquiries Invited

JACO DEVICES, INC.
95 HIGH STREET • HINGHAM, MASS.

For more details circle NED-233 C7 on enclosed inquiry slip



fine wire
engineered for the toughest jobs

National-Standard specializes in development of wire for springs, wire forms and for unusual direct application:

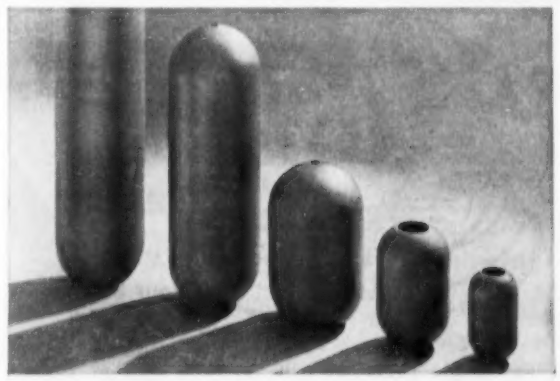
- Drawn wire in fine sizes of titanium, stainless and high carbon steel with all customary and special finishes.
- Trucoat and Micro-Tin music spring wires (Tradenamed N-S developments).
- Brassply, Copperply and Nickelply electroplated wires (Tradenamed N-S developments).
- Special-purpose wire strand and flat and tubular braid in steel and other metals.

Indicate your requirements and write for details.

National-Standard Company • Niles, Michigan

NATIONAL STANDARD

For more details circle NED-234 C7 on enclosed inquiry slip



HACKNEY SEAMLESS SHAPES AND SHELLS

Strength. Hackney deep drawn shapes and shells resist pulsations and hydraulic pressure.

Light weight. Hackney replaces heavy forged, cast or welded parts...cuts finished product weight and costs.

Variety. Shapes in cylindrical, conical or tapered form in many capacities and metals.

Service. Send a sketch. Have our engineers work out the details.

Hackney

Pressed Steel Tank Company
Manufacturer of Hackney Products
1450 S. 66th St., Milwaukee 14, Wis.
Branch offices in principal cities

CONTAINERS AND PRESSURE VESSELS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-235 C7 on enclosed inquiry slip

KODAGRAPH MICRO-FILE EQUIPMENT

Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

- **Kodagraph Micro-File Machines**—three separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.

- **Kodagraph Micro-File Film**—extremely fine grained, high resolution. Assures sharp, crisp rendering of all details.
- **Kodagraph Film Readers,** which permit you to view your films quickly, conveniently.
- **Kodagraph Micro-File Enlarger,** which enables you to make paper enlargements from 16mm. and 35mm. microfilms which are comparable in clarity to the originals.
- **Kodagraph Print Film**—ideal for making positive copies of negative microfilm records.

Write today *for new booklet—"Kodagraph microfilming for new economies in record keeping."*

EASTMAN KODAK COMPANY
Graphic Reproduction Sales Div.
Rochester 4, N. Y.

Kodak

For more details circle NED-236 C7 on enclosed inquiry slip

How to Control DUST, FUMES, ODORS...

economically and efficiently with Johnson-March Engineered Systems

Johnson-March dust control experts can solve any problem or combination of problems involving elimination of dust from sub-micron sizes up. What's your problem? There's a low-cost way to solve it.

Johnson March
Dust Control Engineers
1724 CHESTNUT ST., PHILADELPHIA 3, PA.
Canadian Representative: G. F. Sterne and Sons, Ltd. Brantford, Ontario

For more details circle NED-237 C7 on enclosed inquiry slip

FREE PRESCRIPTION SERVICE ... to keep your Boiler in good health

A single chemical will not take care of your boiler problems. BROOKS' method is to diagnose your needs and operating conditions and then prescribe the treatment needed.

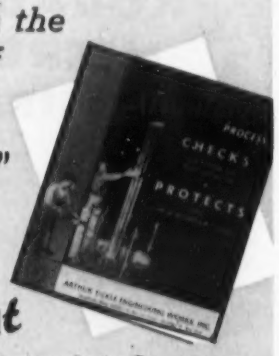
With economy a prime factor, BROOKS has developed boiler treatments known as "BROOKS' POLY-PREPARATIONS".

BROOKS' chemists will make, at no cost to you, a careful diagnosis of your boiler water and operating conditions and then prescribe the proper POLY-PREPARATION formulation.

BROOKS Chemicals, Incorporated
PLANTS
3304 East 87th Street, CLEVELAND 27, OHIO — 461 Cumberland Avenue, HAMILTON, ONTARIO
OFFICES IN PRINCIPAL INDUSTRIAL CITIES
SINCE 1926

For more details circle NED-238 C7 on enclosed inquiry slip

Have You Seen the Advantages of this **NEW "STEEL-SAVING" PROCESS!**



Send today for information describing the

Alumicoat
Molten Aluminum Coating Process

Protects carbon and low alloy steels from high temperature oxidation!

In many cases, expensive high alloy strategic steels may be replaced with low alloy steels which have received the ALUMICOAT Molten Aluminum Coating Process. Under high temperature conditions, these low alloy steels would ordinarily oxidize and scale, but after the application of the ALUMICOAT Process, they have proven superior to strategic alloy steels.

For Free Alumicoat Brochure – Use Coupon below!

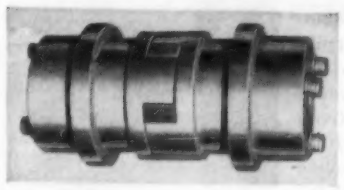
Arthur Tickle Engineering Works, Inc.
21-G Delevan Street
Brooklyn 31, N. Y.

Please send ALUMICOAT Brochure to:

Name _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-239 C7 on enclosed inquiry slip

FLEXIBLE COUPLING
removable for machine disassembly



Radially removable type RRL flexible coupling provides a simple means of disconnecting or disassembling connected machinery without axial movement of the shafts. Load is transmitted by compression of one-piece load cushion in this maintenance and lubrication-free unit. Horsepower ratings range from 7.5 to 40 at 1800 rpm. Maximum bores are from 1⅜ to 2¼ in., diameters from 2 9/16 to 5 in. and lengths from 6⅛ to 7⅝ in. Made by **Lovejoy Flexible Coupling Co.**, Dept. NDC, 4891 W. Lake St., Chicago 44, Ill.

For more details circle NED-240 C7 on enclosed inquiry slip

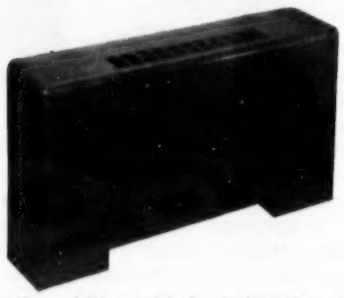
TRACTOR-SHOVEL ATTACHMENT
has four bulk handling functions

Multipurpose Drott bucket is available as an accessory for entire line of Payloader four-wheel drive tractor-shovels. It can be used as a shovel, clamshell, scraper or bulldozer. The 4-in-1 unit is offered for model HU, HH and HO machines. Available from **Frank G. Hough Co.**, 746 Seventh St., Libertyville, Ill.

For more details circle NED-241 C7 on enclosed inquiry slip

REMOTE AIR CONDITIONER
for central heating and cooling

Unit room control of heating, cooling, ventilating, dehumidifying, filtering and introduction of fresh air is provided by this remote air conditioner. Multiroom central heating and cooling is afforded without ductwork from one piping system. Individual unit is quiet in operation and in many installations can use existing piping with only insulation and a chiller added. Filter is easily replaced. Four series with ½ to 2-ton nominal cooling capacity, and 160 to 600 cfm, are offered in cabinet or concealed type units for floor or ceiling mounting. Made by **Airtherm Mfg. Co.**, 716 S. Spring Ave., St. Louis 10, Mo.



For more details circle NED-242 C7 on enclosed inquiry slip

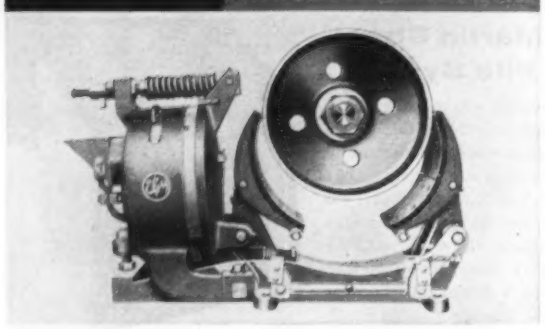
NEW WAY OF STAMPING HEX PLUGS or around circumference of SLEEVES

As handle is turned, gear arrangement moves roller die across part being marked. Fixture uses cradle for sleeves and special table for hexes. Write for Bulletin 646.

Mecco SAFETY **G·R·D STYLE B MARKING FIXTURE**
A product of the Marking Device Industry
M. E. CUNNINGHAM CO.
1055 CHATEAU STREET, PITTSBURGH 33, PA.

For more details circle NED-243 C7 on enclosed inquiry slip

EC&M BRAKES for AC and DC Motors — for LONGER LIFE, FEWER ADJUSTMENTS!



EC&M Type WB Brakes, designed to the new AISE-NEMA standards, assure long life and fewer adjustments because brake lining is thick, tough and of uniform quality throughout its entire thickness. Manual release is standard and connecting lever below the wheel permits quick armature replacements. These brakes are 100% lubricated... dirt is flushed out.

Write for Bulletins 1004 and 1006

THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

8018

For more details circle NED-244 C7 on enclosed inquiry slip

Take an ordinary portable drill

... add a

Supreme **Push-Pull Tapper**

WINNER Mill & Factory's Feature Product Award . . . October 1956

Tap in all materials—fast, safely, accurately—with *minimum* breakage

The Supreme PUSH-PULL TAPPER is an instant-reversing speed reduction unit made expressly for tapping. The prize-winning Push-Pull attaches easily to either the spindle or chuck of any drill. Speed reduction of 7:1 gives adequate power to tap in all materials... instant-reversing means that tap direction can be reversed without stopping drill. Tap can be moved into and out of the hole at will.

With the Push-Pull tap breakage is minimum. Finger-tip control gives operator a better "feel" for break-causing strains. Complete PUSH-PULL TAPPER Kit, No. 9000, costs just $29.95; includes everything but taps. Write for literature.

Supreme **Push-Pull Tapper**
by the makers of SUPREME BRAND CHUCKS
SUPREME PRODUCTS CORP., 2222 S. CALUMET, CHICAGO 16

For more details circle NED-245 C7 on enclosed inquiry slip

AMEs

For fast, accurate measurements, Ames Dial Comparators are the choice of quality control men everywhere. You get definite, impersonal readings directly from the dial. There's no guesswork or figuring.

Special comparators are available for measuring resilient materials such as rubber, paper, etc., and for measuring non-yielding materials such as sheet metal, glass and plastic. Write for complete details.

Representatives in principal cities

B.C. AMES CO.

34 Ames Street, Waltham 54, Mass.

MANUFACTURERS OF MICROMETER DIAL GAUGES • MICROMETER DIAL INDICATORS

▲ For more details circle **NED-246 C7** on enclosed inquiry slip ▲

get the facts on **Silicone Based Paints**

. . . to improve product finishing . . . reduce maintenance costs

Send for this brochure and list of leading manufacturers of paints formulated with Dow Corning Silicones.

first in silicones

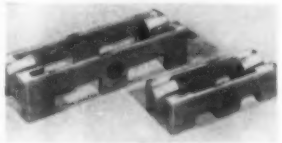
Address Dept. 5415

Dow Corning Corporation

MIDLAND, MICHIGAN

▲ For more details circle **NED-247 C7** on enclosed inquiry slip ▲

PARALLEL, V-BLOCK FIXTURE supports work on machines, benches



Made of cast semisteel, IMP Mules or combination parallel and V-block fixtures have two accurately-ground parallels top and bottom. They will support work on drill presses, benches and surface plates. V's at each end are machined in line. Tool is useful to the diemaker in mounting punch plates to punch holders, and its center is open to accommodate punch shanks. Two sizes are 9 x 3¼ x 2¼ in. and 12½ x 4½ x 3 in. Made by **Illinois Metal Products,** Dept. NED, 429 W. Superior St., Chicago 10, Ill.

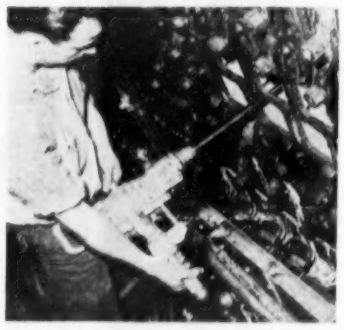
▲ For more details circle **NED-249 C7** on enclosed inquiry slip ▲

MINIATURIZED GEAR BOXES ratios from 4:1 to 12,000:1

Electronic devices, instruments, servomechanisms, computers and small actuators are among applications for size 11, 15 and 18 miniaturized gear boxes. They have gear ratios from 4:1 to 12,000:1. Three sizes have torques up to 45, 65 and 100 oz-in.; diameters of 1.062, 1.437 and 1.750 in.; lengths of 1.55, 1.82 and 1.90 in.; and weights from 2 to 5 oz. Designed for mounting directly to small electric motors, they have sealed, permanently lubricated bearings in the output stage. Made by **Southwestern Industries Inc.,** 5881 Centinela Ave., Los Angeles 45, Calif.

▲ For more details circle **NED-250 C7** on enclosed inquiry slip ▲

TUBE EXPANDER CONTROL makes joint tightness uniform



Operator of the model C Torq-Air-Matic air-powered tube expander drive and control merely sets the desired torque on a dial and starts the tube rolling operation. The expander automatically stops when the setting is reached. Joint tightness is uniform, regardless of tube-sheet hole variation. Model C can be used with boiler tubes from 1 to 2½ in. OD. It produces 75 lb-ft of torque, sufficient to roll 3-in. No. 10 gage tubes in ⅝-in. thick sheet. An air hose is the only external connection required for the 26-lb, 18-in. long unit. Made by **Thomas C. Wilson Inc.,** 21-11 44th Ave., Long Island City 1, N. Y.

▲ For more details circle **NED-251 C7** on enclosed inquiry slip ▲

INSIST ON **SINTZ** COLD ROLLED THREADED STEEL ROD

ORDER FROM YOUR MILL SUPPLY HOUSE—INDUSTRIAL JOBBER OR DIRECT FROM

SINTZ threaded steel and non ferrous rod

CLAUDE SINTZ INC.

1928 STANLEY AVENUE

DETROIT 8, MICH.

STUDS • FORMED RODS PIPE PLUGS

▲ For more details circle **NED-252 C7** on enclosed inquiry slip ▲

ALEMITE Announces the all-new SURGEPRUF LINES OF REUSABLE COUPLINGS AND RUBBER HOSE

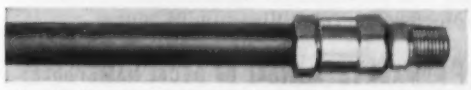
. . . Available Now Nationwide!

It's brand-new from Alemite! For the first time, this famous manufacturer offers you *reusable, non-skive* couplings and rubber hose—exclusively designed for faster, more economical replacements . . . to cut maintenance costs, downtime and inventories!

Rugged Alemite Hose is available for either medium-high or high-pressure service, with single or double wire braid. Couplings of high-strength steel have J.I.C. thread design for positive, long-lasting seal.

Only Alemite Surgepruf Couplings Offer All These Advantages:

- NO HOSE-SKIVING REQUIRED! "Double-wedge" grip forces coupling threads through rubber cover . . . grips either single or double wire braid solidly. Saves both time and labor.
- GIVES TIGHTER GRIP! Double-wedging action gives tighter grip as insert is drawn farther into coupling.
- NO SPECIAL ASSEMBLY TOOLS REQUIRED! Fast, easy assembly with just ordinary tools.
- Types and sizes for all hydraulic lines!



Standardize—save money—with new, factory-tested and field-proved Alemite Surgepruf Couplings and Hose!

ALEMITE REG. U. S. PAT. OFF.

STEWART SW WARNER

Division of STEWART-WARNER CORPORATION

WRITE FOR FREE CATALOG

Alemite, Dept. L-37
1850 Diversey Parkway, Chicago 14, Illinois

Please send me my free copy of the complete Surgepruf Catalog.

Name .....

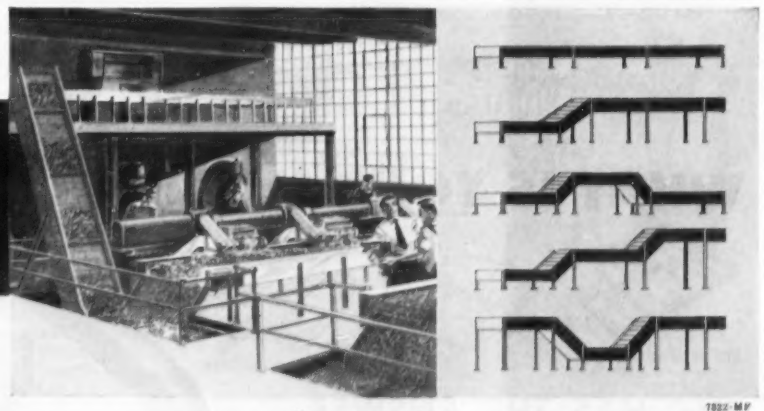
Company .....

Address .....

City ..... Zone ..... State .....

▲ For more details circle **NED-253 C7** on enclosed inquiry slip ▲

MAY-FRAN CONVEYOR STANDARDIZATION



7022-MF

SAVES YOU MONEY . . . NOW . . . AND IN THE FUTURE!

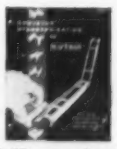
Here is a conveyor program designed for the unusual. NOW . . . you can have a customized conveyor today to meet production needs . . . and with modification, that same conveyor will meet the needs of tomorrow.

The May-Fran conveyor standardization program provides the standard components that can be assembled to form a special or standard conveyor. These same components can be re-arranged at any time to solve production problems in the future.

In addition, standard components mass produced mean conveyor economy right from the beginning.

Here is a conveyor program of standardization program that saves you money now . . . and in the future!

Write today for your copy of Bulletin MF-200



MAY-FRAN ENGINEERING, INC.

1711 Clarkstone Rd., Cleveland 12, Ohio

▲ For more details circle **NED-248 C7** on enclosed inquiry slip ▲

Looking for HARDNESS TESTING FACTS?

Get this free catalog

Send today for catalog containing complete details on all types of Brinell Hardness Testers . . . for laboratory, or production: Dead Weight, Hydraulic, Hand or Motor Operated, Large or Small, Standard and Special.

Since 1914

Steel City Testing Machines Inc

Sales Offices in all metalworking areas.

8819 Lyndon Ave., Detroit 38, Mich.

For more details circle NED-254 C7 on enclosed inquiry slip

NAMEPLATE DECALS

If you have adhesive problems with the water applied decals you are now using...switch to NEW MEYERCORD TYPE I

This is BIG NEWS about a new addition to the Meyercord "family" of commercial nameplate decals! Meyercord has perfected a completely new water applied decal nameplate with revolutionary advantages. This new TYPE I Decal instantly grips virtually any commercial surface with bulldog tenacity. It will cling and adhere with ease to acrylics, metal (painted or unpainted), melamines, polyethylenes . . . to mention only a few of the more difficult. Type I decals are applied with all the usual ease of any water applied decal but they do not depend upon water solubility for adhesion. Even if oversoaked for long periods there is no damage or adverse effect on the adhesion. TYPE I Decal Nameplates can be designed to include colorful halftones as well as plain poster-style designs. However, for the present, this new TYPE I Decal can be manufactured in production line quantities only. Let us prove that TYPE I can be the answer to the most stubborn nameplate problem. Send sample of surface and material—for samples and full information. No obligation, of course.

FREE! "MARK-IT" MANUAL OF DECAL NAMEPLATES

Send today, on your company letterhead, for this valuable full-color guide to every industrial problem in marking, identification, instruction, and information. Gives you hundreds of new ideas for the application of decals to your products.

THE MEYERCORD CO.
World's Largest Decalcomania Manufacturers

DEPT. E-314, 5323 WEST LAKE STREET • CHICAGO 44, ILLINOIS

For more details circle NED-255 C7 on enclosed inquiry slip

DIGITAL DIAL
reads hundredth, tenth, full turns

Easily read at extreme angle of vision, the 10-turn Digidial turns-counting dial gives direct numerical readings in full turns, tenths and hundredths up to 9.99 turns. It is applicable to various multiturn devices, including potentiometers and variable condensers. Reading resolution is 0.05-per cent. Friction lock can be engaged without disturbing dial setting. Made by **Helipot Corp.**, Dept. NED, Newport Beach, Calif.

For more details circle NED-256 C7 on enclosed inquiry slip

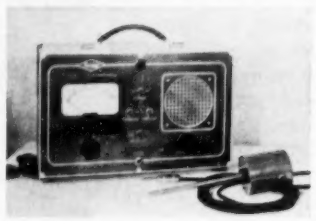
OIL HOLE DRILLS
holes conduct coolant to tip

Continuous holes drilled through the body and shank of these drills allows lubricant or air to pass freely to drill point where it acts as coolant as well as force

to eject chips and dirt. Drills are usable on production runs in screw machines or turret lathes. Oil holes can be easily cleared and cleaned if blocked by foreign matter in the coolant. Drills are stocked in straight shank taper length sizes from 7/16 to 1½ in. by 64ths. Shank ends are tapped for use with threaded pipe connections, or can be made to fit special requirements. Made by **Whitman & Barnes**, 40200 Plymouth Rd., Plymouth, Mich.

For more details circle NED-257 C7 on enclosed inquiry slip

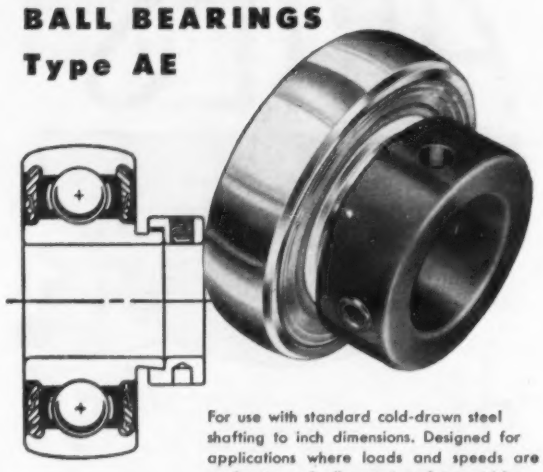
BEARING TESTER
detects wear in bearings, gears



Consisting of metal probe connected to electronic amplifer, this bearing tester will detect and measure wear in bearings, gears, spindles or slides without disassembly of machinery. Tester operates on principle that parts malfunction is reflected as noise energy in supporting bearings. The probe picks up this transient energy output which is shown visually on an adjustable-sensitivity meter as well as fed to loudspeaker for aural interpretation. Instrument accurately shows fluctuations from predetermined readings for duplicate parts. Parts-motion range extends from few inches per minute on sliding ways and carriages, up to 150,000 rpm for rotating parts. Made by **Sperry Products, Inc.**, Dept. ND2, Danbury, Conn.

For more details circle NED-258 C7 on enclosed inquiry slip

NEW DEPARTURE ADAPTER BALL BEARINGS Type AE



For use with standard cold-drawn steel shafting to inch dimensions. Designed for applications where loads and speeds are moderate and alignment and eccentricity are not critical.

Quickly locked in place with cam lock nut. Self-sealed for long use without relubricating, or may be relubricated by needle-injection system. Seals removable if desired.

NEW DEPARTURE
Division of General Motors • Bristol, Connecticut

For more details circle NED-260 C7 on enclosed inquiry slip

Lektromesh

The UNIQUE SOLID-METAL SCREEN
Distinguished for its . . .
• STABILITY in Use
• UNIFORMITY of Hole Size
• WORKABILITY in Manufacturing Processes
• DIVERSITY of Applications to Research and Production

Electro-deposited in pure copper, pure nickel, or nickle-on-copper. Most popular specification, nickel-on-copper can be furnished in lengths up to 100 ft. and widths up to 36" in the following counts — 25, 40, 65, 80 and 100. Nickel-on-copper, as well as pure copper and pure nickel can be furnished in counts ranging from 25 up to 400, but in relatively small size pieces. Write for details. Tolerances on hole size and thickness suitable for the most critical use. LEKTROMESH is ideal for precise filtration, for fabricated products such as fuel filters and electronic shields. For full details let us send our Bulletin on LEKTROMESH. Address Department 11

SERVING INDUSTRY FOR 76 YEARS

THE C.O. JELLIFF MANUFACTURING CORP.
DIPPING BASKETS • WIRE MESH PARTS
LEKTROMESH • WIRE CLOTH
RESISTANCE WIRE • STRAINERS • FILTERS
SOUTHPORT • CONNECTICUT

For more details circle NED-261 C7 on enclosed inquiry slip

WHAT IS YOUR NAILING PROBLEM?

FMC HAS THE ANSWER

Many of the problems of industrial nailing which are troublesome to you today, may have already been successfully studied and solved by FMC nailing machine design and application engineers.

Problems arising from countless combinations of woods, materials, nailing patterns, speeds, space, manpower, pressures, feeds, mechanics, hydraulics and other variables have been resolved by our engineering department. From hundreds of case histories FMC can counsel with you on all phases of automatic nailing.

Hand us your nailing problem. We believe we can give you a successful FMC answer to it from the scores of types, sizes and models of FMC nailing machines which have been built and are in successful operation by firms like yourself—who once also had a nailing problem!

WRITE, giving us full details—or request Bulletin.

FOOD MACHINERY AND CHEMICAL CORPORATION
NAILING MACHINE SECTION
RIVERSIDE, CALIFORNIA

Food Machinery and Chemical Corporation; Nailing Machine Section, Riverside, Calif.
Please send information on Nailing Machine Checked

☐ General Purpose Nailer ☐ Pallet Maker ☐ Multiple Spindle Drive Screw Driver

NAME_____ COMPANY_____
ADDRESS_____
CITY_____ STATE_____

For more details circle NED-259 C7 on enclosed inquiry slip

Flexible SPIRATUBE will handle these jobs better... and save you money, too!

- √ Materials Handling
- √ Ventilation
- √ Exhaust and Fume Removal
- √ Dust Removal
- √ Blowing
- √ Aircraft Applications

Spiratube®, a neoprene-coated, wire-reinforced fabric ducting, is designed to carry air, other gases, many solids and liquids under pressure, suction or gravity. It is available in diameters up to 30" and is extremely flexible, light in weight, easily retractable and portable.

A Spiratube system can be installed in a very short time, since flexible Spiratube bends easily around obstructions or corners, without loss of efficiency.

This Bulletin shows you how SPIRATUBE will reduce production costs Send for it today. Dept. 23.

Flexible Tubing
CORPORATION
Guilford, Connecticut • Los Angeles 64, California

▲ For more details circle NED-262 C7 on enclosed inquiry slip ▲

ELLISCO
BRUSH TOP CANS
HAVE MANY ADVANTAGES ...MANY USES!

Inexpensive HO Style: Screw cap has applicator brush riveted in cap. Capacity: 2 oz. to 1 qt.

D-Style: has high grade, bristle brush soldered in cap. Ring or detachable wood handle. Capacity: 3 oz. to 1 qt.

Use convenient, leakproof ELLISCO BRUSH TOP CANS for paints, pipe "dope", red lead, layout blue and your own products. Your servicemen, maintenance men, salesmen and customers will like these cans because they: SAVE TIME — brush fastened to can lid makes application easy; PREVENT WASTE — brush size is ideal for applying small quantities of liquids; INCREASE EFFICIENCY — they are easy to carry and always ready to use.

Write, wire or call for information and prices.

BAldwin 3-3405

Ellisco
GEORGE D. ELLIS & SONS, INC.
4008 N. AMERICAN ST.
PHILADELPHIA 40, PA.

▲ For more details circle NED-263 C7 on enclosed inquiry slip ▲

The NEW L-S MODEL "E"
ELECTRIC FORK TRUCK

Has all the improved design features you asked for!

The new Model "E" now features a new elevating assembly for even *higher lift* . . . a new, compact hydraulic system that gives *faster, smoother lifting speeds* . . . a new steering mechanism with controls *recessed in the cab* for easier operation.

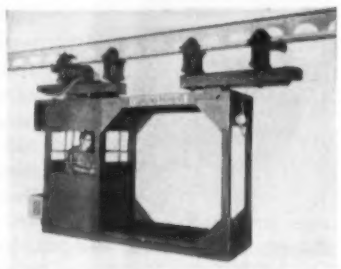
In addition to these and other major improvements, the Model "E" still retains its popular center control Stand-Rest driving position — the safest, most comfortable operating stance. Also, its exclusive "lubricated-for-life" bearings that are factory sealed, never need greasing.

"Get all the facts about this new Model "E". Write for Catalog 32-1 today.

LEWIS-SHEPARD
173 Walnut St., Watertown 72, Mass.
The "MASTER" Line

▲ For more details circle NED-264 C7 on enclosed inquiry slip ▲

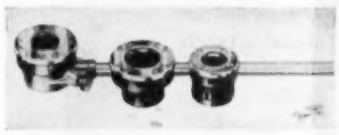
TRAMRAIL CARRIER
for hot metal is air-conditioned



Cab of this carrier for overhead tramrail systems is enclosed with aluminum paneling and is air-conditioned to keep operator comfortable while transporting molten metal. Safety switch prevents carrier from being moved when door is open. Carrier will carry 3100 lb and can travel at up to 300 fpm. Platform can be changed in size and adapted for handling other than molten materials. Other capacities and speeds are also available. Made by **Cleveland Crane & Engineering Co.**, Cleveland Tramrail Div., 1143 E. 283rd St., Wickliffe, O.

▲ For more details circle NED-265 C7 on enclosed inquiry slip ▲

PIPE THREADERS
ratchet type have segmental dies



Size ranges from 1/8 to 1 1/4 in. and 1/8 to 2 in. are offered in Pipemaster drop-head ratchet pipe threaders. They use segmental dies and die heads which are quickly changed, yet cannot fall out. Two-way ratchet provides easy back-off. Tools work equally well for hand or machine operation and incorporate self-starting chasers. Made by **Erie Tool Works**, 733 W. Twelfth St., Erie, Pa.

▲ For more details circle NED-266 C7 on enclosed inquiry slip ▲

SAFETY SWITCHES
three types meet NEMA standards

Three safety switches that meet new NEMA standards include type LD which replaces former D or G types and has a range from 30 to 200 amp in general purpose and rain-tight enclosures. NEC horsepower ratings are included. Type ND for normal duty replaces H, S, A and C designations and includes 30 to 1200 amp ratings in both 250 and 600-v ac and dc, in both enclosure types. NEC and dual element horsepower ratings are included. Heavy duty industrial type HD is offered in gasketed industrial (NEMA 12), water-tight, dust-tight and explosion-resisting enclosures. Made by **Square D Co.**, 6060 Rivard St., Detroit 11, Mich.

▲ For more details circle NED-267 C7 on enclosed inquiry slip ▲

HARDINGE
ELMIRA, N.Y.

STYLE "B"
Master Feed Fingers and Pads

Save costs from 30% to 80% over conventional solid feed fingers.
Low cost replaceable pads are interchangeable among different makes of machines with the same capacity.
Pads have integral lug—no pins or screws to work loose.
Available in all sizes up to 3 1/2" capacity for the following machines:

BROWN & SHARPE
CLEVELAND
CONE
DAVENPORT
GREENLEE
GRIDLEY AND ACME-GRIDLEY
NATIONAL ACME
NEW BRITAIN
WARNER & SWASEY

Hardened steel, bronze, or nickel cast iron pads provide a selection for best feeding qualities and eliminate marring or scoring of stock.

ROUND HEXAGON SQUARE

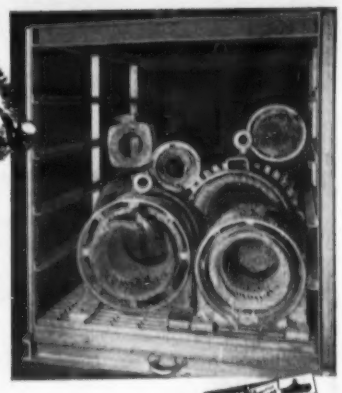
SPECIFY HARDINGE COLLETS
For all Lathes and Automatics
Over 65 Years of Manufacturing Experience

HARDINGE BROTHERS, INC., ELMIRA, N. Y.

Immediate stock delivery from Elmira, Dayton, Chicago, Minneapolis, St. Louis, Detroit, San Francisco, Los Angeles, Philadelphia, Hartford, New York.

▲ For more details circle NED-268 C7 on enclosed inquiry slip ▲

DESPATCH BURN-OFF OVEN



Saves 52 hours in ONE operation!

Typical process load of stators at Am. Electrical & Maintenance Company, Philadelphia. According to this company, "Stator frames, due to complete burning, give the appearance of new motors and result in compliments from our customers."

FOR ALL SHOPS THAT MANUFACTURE OR REPAIR MOTORS

● YEARS OF RESEARCH and coordination with motor manufacturers have resulted in this thoroughly proven Burn-Off Oven design. Here you have faster motor stripping at a minimum of expense. Extra-heavy construction combines with complete, controlled heat distribution for economical performance every day. RCS-5 Oven 24" x 36" x 48"; RCS-6 Oven 48" x 60" x 66". Gas fired.

Write for RCS Bulletin

DESPATCH Established OVEN CO. in 1902

DESPATCH OVEN COMPANY
325 Despatch Bldg.
Minneapolis 14, Minn.

▲ For more details circle NED-269 C7 on enclosed inquiry slip ▲

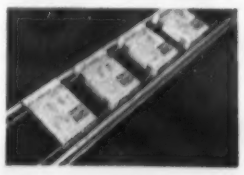
AUTOMATION

As sliced cold meats travel by on stainless steel Wendway belting, operator labels each type as they proceed to the package wrapping machine.

IS SIMPLE

WITH WENDWAY
THE VERSATILE, LIGHT PRODUCT CONVEYOR

Freshly packaged cheese sections are conveyed smoothly and quickly to labelling machine via Wendway.



Cartons or light packages ride perfectly on Wendway's smooth, silent belting.

You can have remote controlled efficiency in conveying light products to any location in your plant. A Wendway system will eliminate multiple handling of products, save man hours and floor space. Wendway, industry's most versatile conveying system, specializes in moving light goods swiftly, quietly, safely and *economically*.

Wendway's steel wire belting is ideal for handling wrapped or unwrapped foods up to twenty pounds per unit. It permits free circulation of air from above and below. Does not sag or accumulate grease and dirt like *ordinary* belting. Wendway can be kept highly sanitary with hot water, or by direct scalding. Regular bright basic (lacquered) belting is fine for packages or products, stainless steel belting is recommended for foods or unwrapped meats.

So . . . whether your problem is assembly, processing, packing, order picking or inspection; you'll find Wendway pays for itself from the day it's installed.

Gentlemen:
Please send me additional information about Wendway for conveying _____
Name _____
Company _____
Address _____ Zone ____ State ____
Have a USP Conveyor Engineer contact me at once ☐

UNION STEEL PRODUCTS COMPANY
ALBION, MICHIGAN

▲ For more details circle NED-270 C7 on enclosed inquiry slip ▲

MOLD COST FOR THIS PART?

Nothing!

Performance: **SUPERIOR**

Price: **CHEAPER**

SAVINGS effected by converting from bronze to Nylon paid for the mold of this spherical bushing.

Formerly it was a 5-step machining operation at a unit cost of .575 cents. It is now made in one operation. In 1000 lots each part costs .255 cents. *Savings on the initial order paid for the mold.*

LET US QUOTE ON YOUR SHORT-RUN PLASTIC MOLDINGS. WE WILL SUBMIT QUOTATIONS WITHOUT OBLIGATION.

DAYTON ROGERS *Manufacturing Company*

Minneapolis 7E, Minnesota

For more details circle NED-271 C7 on enclosed inquiry slip

AN EXCLUSIVE ADVANTAGE OF THE DOLLINGER DESIGN

Easy to Clean

FILTER INSERTS

One of the advantages of the Dollinger Design is the easily cleaned, easily replaceable Filter Insert shown here. A wide variety of filter materials are available in insert form for all types and sizes of filters, permitting quick changes at minimum cost. Write, giving Model No. of filters for which you desire inserts. Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

Radial Fin Type Insert

DOLLINGER STAYNEW FILTERS

For more details circle NED-272 C7 on enclosed inquiry slip

Modern Methods Cost Less

SAVE MATERIAL AND TIME WHEN YOU CUT PAPER, LEATHER, PLASTICS, OTHER SOFT STOCK

Whatever soft materials you cut, Hobbs-Jacques Hand Shears do the job quickly and accurately in one easy stroke. Even if it's only an occasional operation, modern "engineered cutting" equipment saves the cost of waste materials and time.

Hobbs-Jacques Hand Shears include a complete line for widths 12" to 10'. Bench and table models, with and without gauges.

Write for "Engineered Cutting" brochure. No obligation!

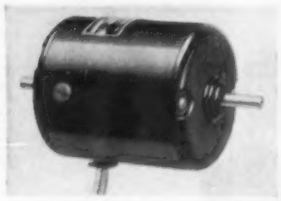
HOBBS MANUFACTURING CO.
EST. 1883 41-C SALISBURY ST., WORCESTER 5, MASS.

New York Area Office—
821 Eighteenth Ave., Irvington 11, N. J.
Chicago Office—549 W. Washington Blvd.
Canadian Representative—The E. V. Larson Company, 572 Queen St., East, Toronto 2, Ont.

WINDERS
HAND AND POWER SHEARS
DIE PRESSES
SLITTERS
CORNER CUTTERS

For more details circle NED-273 C7 on enclosed inquiry slip

FRACTIONAL HP MOTORS
ventilated and enclosed models



Universal or shunt windings in the model M-20 and permanent magnet (direct current shunt) windings in the model M-100 are features of fractional horsepower motors. Ventilated or enclosed design and ball or sleeve bearings are options. Although designed for company's G-11A gear reducer, any of its gear units can be used with it. Ratings are 6 to 220 v ac/dc or dc shunt and 1/30-hp continuous (maximum). Shaft diameter is 5/16-in. maximum. Made by **Rae Motor Corp.**, 2007 Kewaunee St., Racine, Wis.

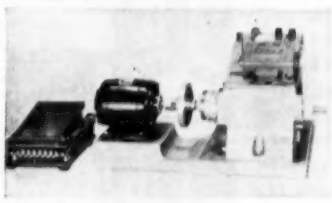
For more details circle NED-274 C7 on enclosed inquiry slip

AIR-POWERED SUMP PUMPS
capacities to 222 gpm on 30-ft head

Weighing about 50 lb and operating on 85 psi air, two self-priming sump pumps can be used for clear or dirty water, oil, sewage and moderately heavy sludge. Model LPC-21 is 22½ in. long and will lift 37 gpm to a height of 100 ft or 222 gpm to 30 ft. Model LPC-41 is same length and will lift 20 gpm against a 200-ft head or 125 gpm against a 40-ft head. Both have one-piece housings containing vane type motors and impeller type centrifugal pumps. They can be connected in series to provide a high head unit with increased capacity. Available from **Atlas Copco Eastern, Inc.**, Dept. NED, 151 Linwood Ave., Paterson, N. J.

For more details circle NED-275 C7 on enclosed inquiry slip

HAND FED COIL WINDER
operates at up to 7500 rpm



All random, close, solenoid and bobbin coils and space windings on grooved forms can be wound on the model 410-B-AM direct drive hand fed coil winder. Speeds up to 7500 rpm are attained by mounting the motor directly to main shaft which runs on ball bearings. Machine winds coils up to 6-in. OD with 27 to 40-gage wire. Output end of spindle is ½-in. and has a flatted shaft for chucks or mandrel adapters. Furnished with winder are tension, ¼-hp variable speed motor, foot operated speed control, resetting automatic counter and magnetic brake. Made by **Geo. Stevens Mfg. Co.**, 6022 N. Rogers Ave., Chicago 30, Ill.

For more details circle NED-276 C7 on enclosed inquiry slip

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine... protects concrete, brick, plaster, tile, wood or composition surfaces.

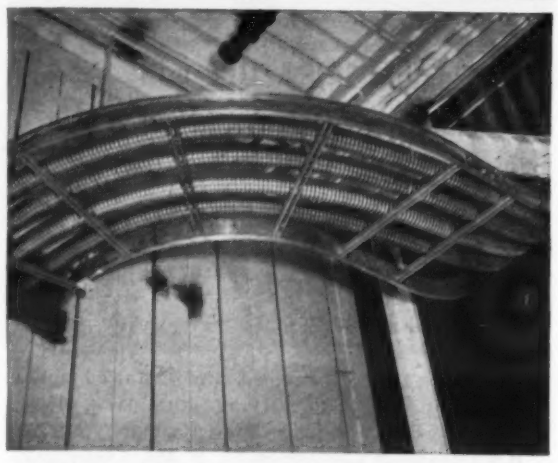
FREE

32-PAGE NoDrip DATA HANDBOOK Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses

J. W. MORTELL COMPANY 526-C Burch St., Kankakee, Ill.

For more details circle NED-277 C7 on enclosed inquiry slip



ARMOR CABLE FOR QUICK NEW POWER

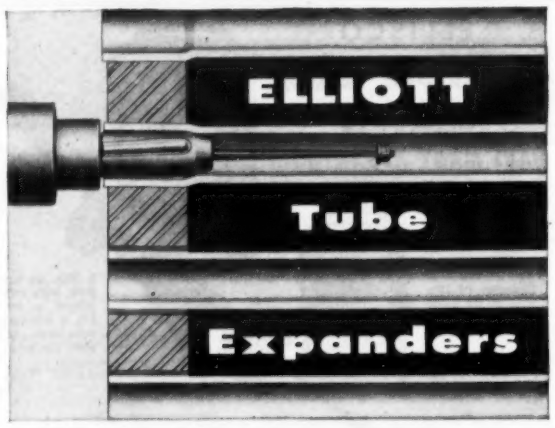
Need to expand or relocate power feeders? Anaconda Duralox* Interlocked-armor cable lets you put power where you want it—fast, economically. Made with its own tough, yet flexible armor, Duralox is installed without conduit. It is laid quickly—indoors or out—on light, easily installed racks, trained smoothly around corners, columns and other obstructions in long, uninterrupted runs. Metal armor affords high protection against damage. NEW BULLETIN DM 5606 contains full information. Write for free copy to: Anaconda Wire and Cable Company, 25 Broadway, New York 4, N. Y.

57405

ANACONDA®

*Reg. U.S. Pat. Off.

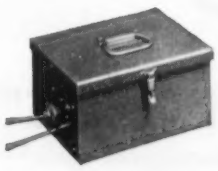
For more details circle NED-278 C7 on enclosed inquiry slip



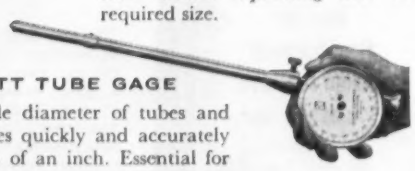
with ELECTRICAL CONTROLS for tight, uniform tube joints

Assures air- or water-tight joint between tube and tube sheet by use of rotating, parallel self-feeding rolls. Elliott expanders have adjustable ball-bearing thrust collars, and rolls having a radius on front and back ends. Available in 4 types, for tubes ¼" through 3", 14 gage.

with ELLIOTT electrical controls, your tube expanding job becomes a precision operation



A *torque limiting device* takes guesswork out of tube rolling. Designed for use with any standard tapping motor, it's compact, easy to operate, and reduces chance of tube failure and tube sheet distortion. *Voltage Balancer* eliminates need for voltage regulator, *Torque Control Knob* assures expanding tube to required size.



THE ELLIOTT TUBE GAGE

Measures inside diameter of tubes and tube sheet holes quickly and accurately in thousandths of an inch. Essential for setting tube expander controls.

Whatever your requirements, Elliott has the tube cleaning, maintenance and expander equipment. Contact your Elliott District Office or write Elliott Company, Lagonda Division, Springfield, Ohio.

Y7-2A

ELLIOTT Company
Headquarters for Tube Cleaners and Expanders

STEAM TURBINES • MOTORS • GENERATORS • DEAERATING HEATERS • EJECTORS • CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS

For more details circle NED-279 C7 on enclosed inquiry slip

NEW! KOPPERS Model D Aeroturn Dust Collector

fits anywhere and maintains over 99.9% efficiency automatically!

Easy to install—completely factory assembled, delivered to you ready to uncrate and put into operation. *Compact*, yet *exclusive* automatic efficiency (over 99.9%) still maintained.

The "heart" of this new Koppers Model D Aeroturn is the *reverse-air-jet action*. This reverse air cleans the filter bag, maintains ideal filtering conditions *automatically*. Pressure switch* controls cleaning action by switching air jet arm "on" when pressure rises—"off" when pressure is normal for highest efficiency.

Get *more information* about this *exclusive* dust collector. From 500 to 4800 CFM capacities! Write today for complete engineering data explaining operation, floor space, maintenance and installation features! KOPPERS COMPANY INC., Industrial Gas Cleaning Dept., 5403 Scott St., Baltimore 3, Md.

*Hersey Patents

KOPPERS

AEROTURN DUST COLLECTOR

Engineered Products Sold with *Service*

For more details circle NED-280 C7 on enclosed inquiry slip

panel mounted Pyrometers with *Alnor* Accuracy

Alnor Pyrometers are designed to give consistently accurate temperature readings under the most severe conditions of vibration, dirt and corrosive atmosphere. Sturdy, laboratory-precise movements are cushioned in fume-proof, splash-proof welded steel cases in front of board or flush type mountings. Six series available for single circuit up to 31 circuit applications. Eleven standard ranges covering 0-300° F. to 0-3000° F. or centigrade equivalents.

Single-circuit series data is covered in Bulletin 4371.

Multi-circuit series data covered in Bulletin 4361.

Circle number you wish; attach this ad to your letterhead, and mail to: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

PRECISION INSTRUMENTS FOR EVERY INDUSTRY

Alnor

For more details circle NED-281 C7 on enclosed inquiry slip

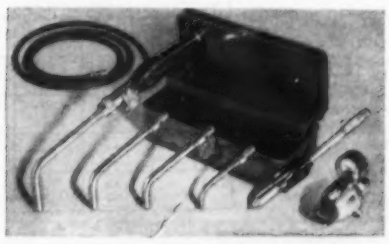
Fast · Clean · Economical

Prest-O-Lite 5-in-1 OUTFIT

Trade-Mark

For All Soldering, Heating, and Brazing Needs

Save time and money on all soldering, heating, and light brazing jobs with this economical, air-acetylene outfit. No pumping, priming, or generating to waste time. No smoke or soot to clean up. One handy kit with a flame for every job. Ask your LINDE jobber for a demonstration. Or write LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: Union Carbide Canada Limited, Toronto.

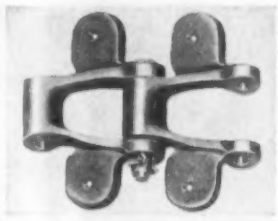


GET IT FROM YOUR **LINDE** JOBBER

The terms "Linde" and "Prest-O-Lite" are registered trade-marks of Union Carbide and Carbon Corporation.

For more details circle NED-282 C7 on enclosed inquiry slip

STEEL CONVEYOR CHAIN has wings for attaching slats



Heat treated forged steel is used in this pin type conveyor chain, designed to withstand hard wear and shock. Corrosion or heat resistant materials can be furnished for acid or heat conditions. Each easily assembled and disassembled link has wings for attaching wood or metal slats for all types of duty. Standard pitch single or multiple strands are available, as are sprockets and conveyor aprons. Made by **Robert A. Main & Sons, Inc.**, 271 Pascack Rd., Paramus, N. J.

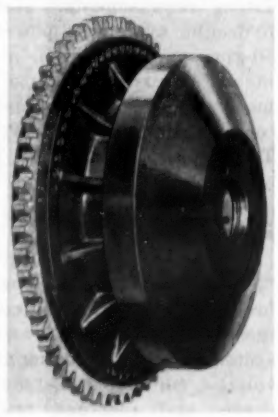
For more details circle NED-283 C7 on enclosed inquiry slip

CABINET-TYPE SHOP DESK has lock-equipped storage

Steel cabinet-type shop desk for stand-up writing use has a lock-equipped storage section for safekeeping of records and other valuables. Half-shelf in this lower section is adjustable, and an additional shelf can be added to double shelf area. Standard features include comportable sloping writing top, protective hood with pigeon holes and pen holders, drawer with flat key lock and formed footcaps for each leg. Desk is available knocked-down from **Republic Steel Corp.**, Berger Div., 1000 Belden Ave. N.E., Canton 5, O.

For more details circle NED-284 C7 on enclosed inquiry slip

AIR-OPERATED CLUTCHES two types suited for remote control



Air engagement and spring release of Flex-Disc and Gear Tooth industrial clutches adapt them for remote control. Ten sizes in each type are offered for general industrial uses requiring working torques from 1600 to 30,000 lb-in. Both are built with single and double disks and are similar to manually operated clutches (still available) except for addition of an air cylinder. Made by **Industrial Clutch Corp.**, 521 Frederick St., Waukesha, Wis.

For more details circle NED-285 C7 on enclosed inquiry slip

SOCKET SET SCREWS . . . FAST!

Expanded Cleveland line includes #0 to 1 in. diam., 5 different point styles

Cleveland now provides one source for fast service on all your socket set screw requirements – cup, half dog, flat, cone or oval points in heat treated alloy steel from #0 to 1 in. diam. (#0-#3, cup point only). 18-8 stainless is also available in standard cup point sizes from #0 to ½ in.

Cleveland socket set screws have deep, precision formed sockets for non-slip high-torque wrenching and greater holding power. Threads are cold rolled for high-strength grain structure.

Write for technical data and prices

CUP—most commonly used; offers all-around utility.

HALF DOG—for hardened members or where thread end must be protected.

FLAT—for parts needing frequent adjustment or against soft metal.

CONE—sets machine parts permanently on shafts.

OVAL—used against splines or shaft spotted to receive it.

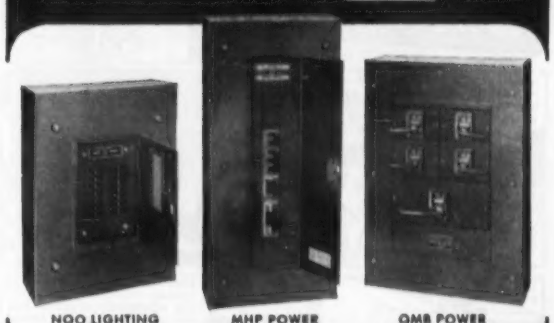
THE CLEVELAND CAP SCREW COMPANY

4444-18 Lee Road, Cleveland 28, Ohio

Warehouses: Chicago • Philadelphia • New York • Providence • Los Angeles

For more details circle NED-286 C7 on enclosed inquiry slip

IT'S RISKY TO UNDER-BUY UNNECESSARY TO OVER-BUY



NQO LIGHTING PANELBOARD — MHP POWER PANELBOARD — QMB POWER PANELBOARD

One of these Square D Panelboards Will Do Your Job Right—At the Right Price!

And . . . you can get all of them off-the-shelf from your Electrical Distributor. Write for the complete panelboard story. Address Square D Company, 6060 Rivard Street, Detroit 11, Michigan.

NOW . . . EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

For more details circle NED-287 C7 on enclosed inquiry slip

CUT HANDLING COSTS - - - STOCK MORE IN LESS SPACE

LOW-COST, STACKBIN-IN-STACKRACK UNITS PAY FOR THEMSELVES IN 3 WAYS

SAVE SPACE – Individual units stack easily and lock securely as high and as long as you need. Seven different size units available.

SPEED PRODUCTION – Stackbins reduce handling time. Can be used intra-plant in processing, sub-assembly, assembly and stockroom. Roller Bearing Slide Stackracks available for heavier contents. Locking Pallets supplied for unit load handling.

REDUCE INVENTORY TIME – Accessibility of Stackbins for weight count speeds inventory taking; visibility of contents simplifies control.

STACKBIN-IN-STACKRACK COMBINATIONS are made of heavy gauge steel with all welded construction and baked enamel finish.

LOW-COST STACKBIN PRODUCTS ARE SOLD DIRECT – A factory trained, Stackbin Sales Engineer will study your plant requirements, at no obligation, and will make specific recommendations for handling and storage efficiency. Buy only as many units as you need.

WRITE TODAY FOR FULL INFORMATION

STACKBIN CORP. 1081 Main St., Pawtucket, R. I.

Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN SYSTEM "Stacked and Still Accessible"

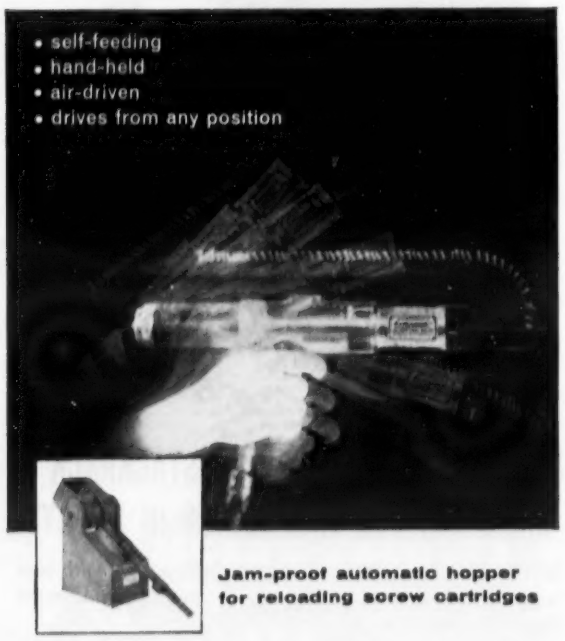
For more details circle NED-288 C7 on enclosed inquiry slip

▲ For more details circle NED-289 C7 on enclosed inquiry slip ▲

new!

SHAKEPROOF SEMSPAK®

automatic screw driver



Jam-proof automatic hopper for reloading screw cartridges

Completely self-contained, Semspak Power Driver feeds screws automatically, drives screws automatically as fast as you can pull the trigger . . . from any angle! Only eighteen inches long and weighing just six and one half pounds, Semspak Power Driver is completely portable. Screw "shooting" is prevented as screw cannot be removed from jaw until driven into work piece.

Semspak drives machine screws, wood screws, sheet metal screws, thread-cutting screws and Sems (screw and washer assembly) in lengths from 7/16" to 1¼". It accommodates the following head styles: round, pan, oval, flat, fillister and hexagon heads, slotted or Phillips. Torque is simple to adjust and bits are easy to change. Air-powered through a single lightweight hose, Semspak Power Driver will not mar work surfaces. The Semspak Power Driver visible-load cartridge holds up to sixty #8 and fifty #10 screws and is automatically reloaded from the hopper.

For complete information, write for Shakeproof Semspak Power Driver catalog today

SHAKEPROOF

"Fastening Headquarters" ®

DIVISION OF ILLINOIS TOOL WORKS

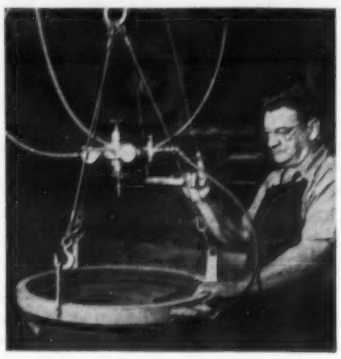
2501 N. Keeler Ave., Chicago 39, Ill.

Offices In Principal Cities

Canada Illinois Tools Limited, Toronto, Ontario

▲ For more details circle NED-290 C7 on enclosed inquiry slip ▲

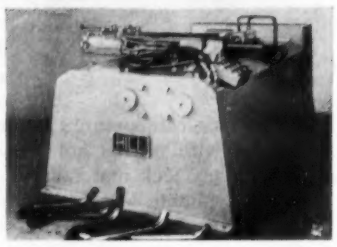
PNEUMATIC LIFTING DEVICE
rubber ring expands to hold part



"Green" grinding wheels up to 48-in. diameter and weighing up to 600 lb are safely moved by the Pneuma-Grip handling device which consists of a steel supporting ring or frame, lined with a pneumatic rubber "tire." Assembly is hung from a hoist by a wire rope sling. Objects are moved by positioning the device around them and inflating the tire with compressed air. It grips objects firmly without damaging delicate surfaces. Only 5 to 25 psi air is required. Although current models have circular supporting rings, device can be supplied shaped to fit any desired product. Available from **Pawling Rubber Corp.**, 5 Dover Rd., Pawling, N. Y.

▲ For more details circle NED-291 C7 on enclosed inquiry slip ▲

BENDING MACHINE
produces accurate tubular parts



Ferrous or nonferrous tubular parts in which two or more bends of varying angles must be in accurate relationship are produced by this press type bending machine. One end of the part is clamped and held stationary while a bend is produced on the other end by a hydraulic press ram and wiper die assembly. Other bends are produced in sequence with maximum operator safety. Bending can be performed with or without a mandrel, according to tubing requirements. Horizontal machine's 1000-psi hydraulic system is powered by a 30-hp motor and 40-gpm pump for ram, mandrel and wiping die cylinders. Separate 2000-psi hydraulic system with 5-hp motor and 3-gpm pump powers the die clamping system. Made by **Walter P. Hill, Inc.**, Dept. 1, 22183 Telegraph Rd., Detroit 19, Mich.

▲ For more details circle NED-292 C7 on enclosed inquiry slip ▲

Electron Microscopes

North American Philips Co., Instruments Div.—"Norelco Electron Microscopes" is title of 12-page brochure giving data on construction and operation of these instruments. Covered are the electron optical system, vacuum pumping unit, electronics system, high voltage, column, gun, magnetic beam alignment, condenser and aperture, beam wobbler, objective lens and astigmator.

▲ For more details circle NED-293 C7 on enclosed inquiry slip ▲

ON SILICONE RUBBER PARTS

for extreme temperature applications

7862-SR

This 16-page illustrated multi-colored catalog is yours for the asking. It covers in detail more than 40 different rubber compounds, recommends applications for each type and suggests methods of fabrication or production which will provide maximum economy. Hundreds of different rubber shapes are shown and facilities for special rubber compounding are outlined.

Use publication inquiry slip or write direct to

STALWART RUBBER COMPANY

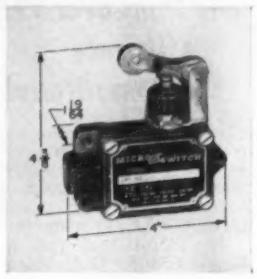
Manufacturing Plants in Jasper, Georgia and Bedford, Ohio
Main Offices at 151 Northfield Rd., Bedford, Ohio

▲ For more details circle NED-294 C7 on enclosed inquiry slip ▲

MICRO SWITCH . . . FIRST IN PRECISION SWITCHING

This switch will handle inrush currents as high as 75 amperes

MICRO SWITCH Type "F" Switches are rugged, compact, easy-to-mount precision switches with a high current capacity. Seals in the plunger and cover make the enclosure dust and oil tight. The SPDT series will make and break steady state currents of 20 amperes 125, 250 or 460 volts a-c and handle inrush currents as high as 75 amperes. Available with roller-lever actuator (shown), in-line plunger, roller plunger and manual actuators. *(Send for Catalog 83)*



Do you get MICRO Tips?

Tells many of the thousand and one ways plant operators have found to use precision snap-action switches to improve their production equipment. Let us put you on our mailing list.

MICRO SWITCH

A DIVISION OF MINNEAPOLIS-HONEYWELL REGULATOR COMPANY

In Canada, Leaside, Toronto 17, Ontario • FREEPORT, ILLINOIS

▲ For more details circle NED-295 C7 on enclosed inquiry slip ▲

FLAMELESS BLOW TORCH

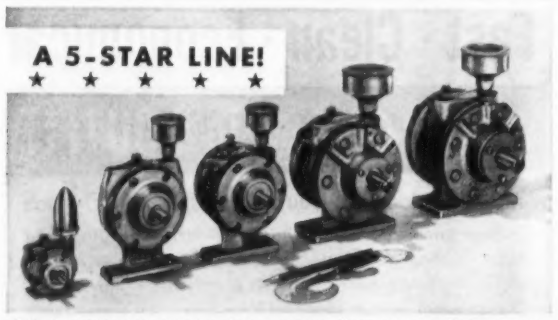
for quick heat up to 1000°

Use the Mamco Flameless Blow Torch on any application requiring a concentrated hot air blast. You can soften, form, mold and patch plastics, etc. easily with safety . . . The Mamco Flameless Blow Torch gives you quick heat up to 1000° *without flame.*
Powerful Mamco electric motor 110-120 Volt AC and DC. Turbo type fan provides steady, strong air blast. Eight foot heavy duty cord. Double jacketed heater housing. Adjustable air intake. Order direct.
Price $37.50

WRITE DEPT. N

Master APPLIANCE MFG. CO. RACINE, WISCONSIN

▲ For more details circle NED-296 C7 on enclosed inquiry slip ▲



★Model 1AM ★Model 2AM ★Model 4AM ★Model 6AM ★Model 8AM

GAST ROTARY AIR MOTORS

are explosion-proof, variable in speed, low in cost!

Connected to any compressed air line, Gast Air Motors offer you:

1. Explosion-proof power. No danger!
2. Low initial cost per rated h.p.
3. Variable-speed with valve control.
4. Can't burn out from overloads.
5. Vanes take up their own wear.
6. Reversible rotation optional on Models 4AM and 8AM.
7. Very compact—light in weight.
8. Top-quality ball-bearing design.

Write for Bulletins—specify models!

Gast Manufacturing Corp., P.O. Box 117-R Benton Harbor, Mich.

PERFORMANCE TABLE				
Model No.	R.P.M.	HORSE POWER at 60 P.S.I.	HORSE POWER at 90 P.S.I.	Wt. Lbs.
1 AM	2,000 5,000	0.11 0.21	0.13 0.30	1½
2 AM	1,000 2,000	0.22 0.40	0.35 0.57	5⅛
4 AM	1,000 2,000	0.48 0.78	0.73 1.10	7½
6 AM	500 2,000	0.40 1.30	0.65 2.09	18
8 AM	500 1,500	1.00 2.30	1.45 3.80	25

Original Equipment Manufacturers for Over 25 Years

GAST ROTARY • AIR MOTORS TO 4 H.P. • COMPRESSORS TO 30 P.S.I. • VACUUM PUMPS TO 28 IN.

See Our Catalog in Sweet's Product Design File

▲ For more details circle NED-297 C7 on enclosed inquiry slip ▲

THIS NYB&P CONVEYOR BELT HAS BUILT-IN RIP STOPPERS

"RESISTORIP" construction ejects sharp, partly-embedded objects that ruin belts

How often have you had to junk an almost new conveyor belt . . . ripped to shreds by razor-sharp particles which embed themselves in the belt, then jam and slit long sections?

NYB&P offers "RESISTORIP" . . . a belt to end this useless loss. At close intervals throughout its length, transverse groups of high-tensile steel wires are built into the belt's carcass. When a sharp, partly-embedded object starts to rip this belt, it quickly encounters one of these wire groups. Immediately it is ejected . . . and damage to the belt is confined to a very short section, only inches in length!

Your NYB&P Distributor is listed in yellow pages of phone book

NYB&P NEW YORK BELTING & PACKING CO. 1 Market St., Passaic, N. J.

AMERICA'S OLDEST MANUFACTURER OF INDUSTRIAL RUBBER PRODUCTS

For more details circle NED-298 C7 on enclosed inquiry slip

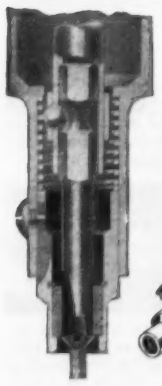
NEW MIDGET MICRO-SET TORQUE TOOLS

Meet Government specifications. Ideal for aviation industry. Wide range in inch, ounces or pounds. Torque preset thru back of handle. Square or ratchet drive. Write for details.

APCO MOSSBERG COMPANY
161 Lamb Street, Attleboro, Mass.

For more details circle NED-299 C7 on enclosed inquiry slip

For driving slotted screws MAGNA FINDER does it easier, cheaper



The Magna Finder picks up the screw, positions it...so that with one-hand control the bit automatically enters the slot of the screw and drives it home. Alnico Magnet has ten times ordinary "pull" and positively positions screw. Results? Production up, costs down.

Interchangeable with regular power screwdriver finders. Available for *all* makes of power drivers and *all* kinds of screws. Thousands in use. Ask your power screwdriver salesman for a demonstration of the complete Magna Driver line.

Magna Finder—U. S. Patent #2,671,484

NEW manual ready; write Dept. RI-F Complete information on Magna Bit Holders, Finders, Sockets and Hand Screwdrivers. Magna Driver Corporation, 779 Washington Street, Buffalo 3, N. Y.

For more details circle NED-300 C7 on enclosed inquiry slip

ELECTRIC BAG CLOSER
stitches bags of various materials

Weighing only 10½ lb, the Class 2100 portable electric bag closer can close bags of cotton, burlap, jute, multiwall paper and laminated paper. It produces type 401 and 101 stitches, has top feed, an integral direct drive motor and a safety protected mechanical thread-cutting device. It is usable for limited or intermittent operations and to supplement high production machines. Closer is furnished for portable hand operation, suspension by spring balancer or with a pedestal bracket. Made by **Union Special Machine Co.,** 416 N. Franklin St., Chicago 10, Ill.

For more details circle NED-301 C7 on enclosed inquiry slip

RECESSING TOOLS
chamfer drilled or reamed holes

Automatic chamfering of both sides of drilled or reamed holes is possible with JF series recessing tool. It is usable where production quantities permit use of multiple drilling, transfer or other high production machinery. Tools utilize actuating mechanism of a rack and gear and a circular form cutter. Made by **Maxwell Industries, Inc.,** Route 8, Macedonia, O.

For more details circle NED-302 C7 on enclosed inquiry slip

ROLLER SKID
handles 1000 to 6000-lb loads

Loads weighing from 1000 to 6000 lb can be moved easily with this Multiton Junior roller skid. Only 2⅝ in. high, the all-steel unit moves on three 2¼ in.

diameter rollers, each equipped with neoprene-sealed ball bearings. It weighs only 12½ lb and can be used in sets of two, three or four to fit the load. Dolly is available in straight motion and swivel type models from **Stokvis-Edera & Co.,** Dept. NE, 18 Secatoag Ave., Port Washington, N. Y.

For more details circle NED-303 C7 on enclosed inquiry slip

NEW COMPACT POWERFUL

Quiet!

ELECTRIC VIBRATOR

To speed the flow of stubborn material from hoppers, bins and chutes of all sizes and shapes.

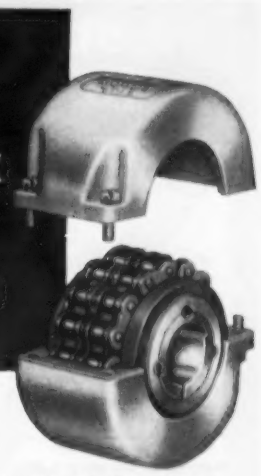
Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

For more details circle NED-304 C7 on enclosed inquiry slip

NOW! TAPER-LOCK CHAIN COUPLINGS



Off the shelf... No reboring

New Dodge Chain Couplings (with new line of aluminum covers, too!) provide strong, positive, compact coupling of shafts, with accomodation for usual slight misalignment. Like Dodge Flexible and Rigid Couplings, the new Chain Couplings employ the famous Taper-Lock Bushings, available in desired sizes from distributors' stocks — no reboring required. For detailed information write now for Bulletin A644.

Dodge Manufacturing Corporation, 2100 Union St., Mishawaka, Indiana

DODGE of Mishawaka, Ind.

For more details circle NED-305 C7 on enclosed inquiry slip

this interesting illustrated booklet shows:

how to SAVE space, power, material, time with the remarkable all-steel FALK SHAFT MOUNTED DRIVE!

Falk Shaft Mounted Drives are made in 6 sizes (½ to 30 hp), single or double reduction; output speed range 420 to 10 rpm.

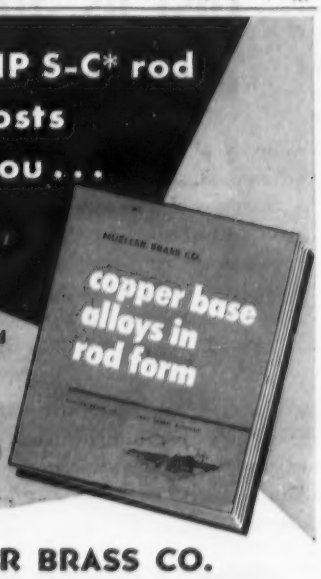
There is a wealth of helpful, useful ideas and information in this data-packed booklet on the all-steel Falk Shaft Mounted Drive—a rugged, compact speed-reducing unit for direct mounting on the shaft to be driven. It illustrates typical applications where efficient speed reduction in limited space has been attained. This interesting booklet also contains: Selection tables (single and double reduction), load classification table, sheave ratio and minimum sheave diameter tables, dimension data, mounting diagrams, and full "How to Select" information.

Let us send you your personal copy. You will find it valuable. Write the Falk Corporation, 3043 W. Canal St., Milwaukee 8, Wisconsin—and ask for Bulletin 7101.

FALK a good name in industry

For more details circle NED-306 C7 on enclosed inquiry slip

new RED TIP S-C* rod can cut costs for you...



"super-cutting" rod produced semi-continuously available only from the MUELLER BRASS CO. . . . send for complete manual

MUELLER BRASS CO.
PORT HURON 37, MICHIGAN

194

please send me a copy of your ENGINEERING MANUAL FM-3010

NAME
COMPANY
ADDRESS

For more details circle NED-307 C7 on enclosed inquiry slip

need **springs** or **formed wires?**

let **WICKWIRE** supply them

Wickwire engineers have years of experience in designing the right spring and formed wire for the job. They can work from a sketch, handmade model, or statement of purpose with overall dimensions.

Get the whole story today. Write for your copy of Wickwire's Springs and Formed Wires manual (Bulletin S-500). Wickwire Spencer Steel Division, The Colorado Fuel and Iron Corporation, P.O. Box 551, Palmer, Mass.

THE COLORADO FUEL AND IRON CORPORATION—Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION—Atlanta • Boston • Buffalo • Chicago
Detroit • New Orleans • New York • Philadelphia
CF&I OFFICES IN CANADA: Toronto • Montreal

CF&I **WICKWIRE SPRINGS AND FORMED WIRES**

4469

PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-308 C7 on enclosed inquiry slip

Mr. R. E. Randall
BUYER
Libby, McNeill & Libby
Chicago, Illinois

"Westroll Towels cost us 30% less across the U.S.A."

"When you're concerned with a multi-plant operation such as ours, a small savings in an expendable item such as paper towels can mean many valuable dollars saved at the end of the year. We found, by using Westroll Towels in the Micromatic Cabinet, that our costs were reduced by 30% based on a closely supervised comparative test against interfold towels," says MR. R. E. RANDALL, Buyer for Libby, McNeill & Libby, Chicago.

"With these savings, it was only natural that we should shift a major portion of our plant facilities throughout the country over to this efficient and economical toweling. Our washrooms remain neater, too; and we realize additional savings in cabinet-filling time and janitor clean-up time."

FREE

Would similar savings interest you? Send for our free folder on cutting towel costs with Westroll. Just check the reader inquiry service in this magazine. Or write—

WEST DISINFECTING COMPANY
Dept. 16, 42-16 West Street, Long Island City 1, N. Y.

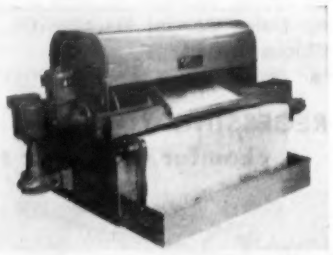
For more details circle NED-309 C7 on enclosed inquiry slip

CABLE CUTTER
shears up to 7/8-in. wire rope

Cable or wire rope up to 7/8-in. diameter is cut fast and accurately with this cable cutter. Operation requires no special skill. Heat treated replaceable steel blade and dies are made from selected steel and assure maintenance of cable's original shape after cutting. Cut end is smooth. Cutter has 5 7/8-in. base and weighs 8 lb packed. Made by **Chicago Screw Co.**, Sales Service Dept., 2899 Washington Blvd., Bellwood, Ill.

For more details circle NED-310 C7 on enclosed inquiry slip

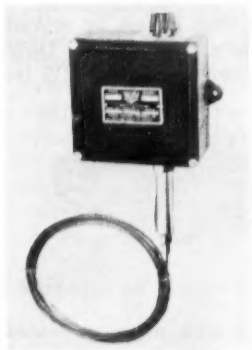
COOLANT FILTER
trough intake facilitates cleaning



Efficiency and ease of maintenance result from redesign of the BarnesdriL Kleenall coolant filter. Intake distributor has been changed from pipe type to trough type for easier cleanout of sludge drop-out and foreign material. Drive has been placed on front idler shaft, size of seal wheels increased for greater sludge build-up area, and motor torque has been increased in larger models. Improved clutch and heavier conveyor belt are offered as well. Made by **Barnes Drill Co.**, 866 Chestnut St., Rockford, Ill.

For more details circle NED-311 C7 on enclosed inquiry slip

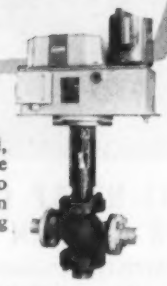
TEMPERATURE CONTROL
in range spans of 100 or 200° F



Remote bulb type E13 adjustable temperature control, consisting of liquid filled bulb, capillary tube and bellows, is offered in 100 or 200° F range spans between limits of −150 and 650° F. Control is used in degreasers, water baths, incubators, hot plate presses, cooling cabinets, air conditioners and food and drink vending machines. Normally open, normally closed or double-throw switches can be supplied. Black wrinkle finished cast aluminum case encloses control head. Made by **United Electric Controls Co.**, 79 School St., Watertown 72, Mass.

For more details circle NED-312 C7 on enclosed inquiry slip

Useful New Bulletin...
ASKANIA ELECTRO-HYDRAULIC VALVE ACTUATOR



Here's a well illustrated, informative bulletin with ample facts, photos and drawings to show you the advantages of an all-electric control system using this unique valve actuator.

You'll want to know "why"

There are numerous reasons why this new electro hydraulic final control element is the answer to many control problems. Bulletin #38.2 contains the type of information engineers want at their fingertips.

Keep informed—write for your copy

Regardless of your present needs, you'll want to keep abreast of this latest development which revolutionizes FINAL CONTROL problems. Just write Askania Regulator Company, 258 E. Ontario, Chicago 11, Ill.

ASKANIA REGULATOR COMPANY
"CONTROLS FOR INDUSTRY"
HYDRAULIC, ELECTRONIC CONTROLS & SERVOS, GENERAL SYSTEMS, ENGINEERING & COMPUTER SERVICE, VALVE ACTUATORS & CYLINDERS
A SUBSIDIARY OF CPI

For more details circle NED-314 C7 on enclosed inquiry slip

MAINTENANCE PAINTING COSTS TOO HIGH

TYGON "ATD" *Try... Hot Spray* PAINT

SAVES UP TO 20% ON MATERIALS **SAVES UP TO 30% ON LABOR**

Time, labor and materials all add up to money . . . you save on all three with Tygon ATD Hot Spray Vinyl Paint.

Using any standard hot spray equipment, heat reduces Tygon ATD to spraying consistency. One pass of the spray gun builds a smooth, tough, fast drying vinyl paint film with superior adhesion . . . that is several times thicker than cold sprayed paints. Edge build-up is perfect—there are no runs or sags—overspray is reduced. Corrosion resistance is excellent.

Using the two coat-5 mil system, *labor is reduced up to 30%, material costs up to 20%* through faster job completion, elimination of thinners and lower paint loss.

PLASTICS & SYNTHETICS DIVISION

Write today for Bulletin ATD-9

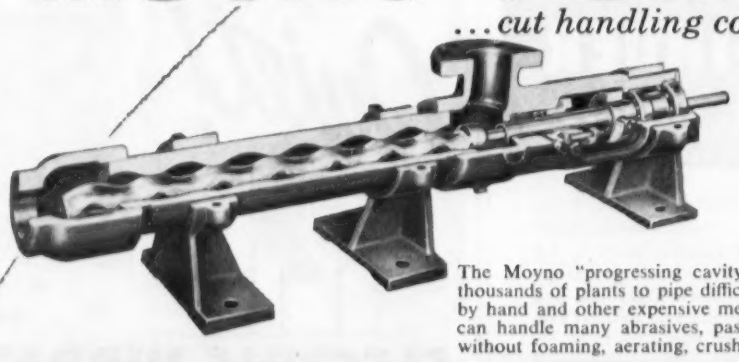
U. S. STONEWARE
AKRON 9, OHIO 205E

For more details circle NED-315 C7 on enclosed inquiry slip

from abrasive slurries to delicate foods

MOYNO® PUMPS

...cut handling costs



The Moyno "progressing cavity" pumping principle has enabled thousands of plants to pipe difficult materials that were transported by hand and other expensive means. Moyno is the only pump that can handle many abrasives, pastes, slurries, chemicals, foods, etc. without foaming, aerating, crushing or excessive pump wear.

As shown above, Moyno Pumps have a screw-like rotor that revolves in a double threaded stator creating progressing cavities which smoothly move material through the pump. They will pump anything that will move through a pipe . . . even plaster and non-pourable pastes! Moyno Pumps are available in capacities up to 500 gpm and pressures up to 1000 psi.

Examine your processing methods. No doubt there are several places where Moyno Pumps can drastically cut costs. Ask us, we'll give you a frank answer. Send us an outline of your problem today! Write for Bulletin 30-NE.

ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO — BRANTFORD, ONTARIO

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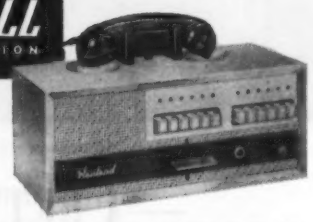
take the "TURTLE PACE" out of your business with

ELECTRONIC AMPLICALL INTERCOMMUNICATION

featuring new light and chime signals



the "clear line" to everyone in your business

SAVES TIME • CUTS COSTS • Speed up your business pace with this time-saving "clear line" internal communication system. Have *2-second speech contact* within and between all departments—get information, issue instructions, hold conferences, speed action throughout your business—at the touch of a button. AMPLICALL takes the load off busy switchboards, puts an end to wasteful walking and waiting—pays for itself in speedier, more efficient operations. Models now available with new light and chime signals. There is an AMPLICALL system for your exact needs. Write for complete facts today.

See your Classified Phone Book under "Intercommunication" for the nearest AMPLICALL specialist—or mail coupon today for full details.

RAULAND-BORG CORPORATION
3515-D Addison St., Chicago 18, Ill.

▲ For more details circle NED-316 C7 on enclosed inquiry slip ▲

ELCO SCREWS ARE GOOD SCREWS
Ask a man who has used them

SMALL SCREWS Special equipment and special engineering and tooling experience enable us to offer a broad line of screws of various types in the smallest sizes for which dimensions are standardized. These include body diameters as small as No. 0 and lengths as short as ⅛". They can be made in any of our standard and special materials, and with any of our regular finishes. Engineering or design assistance is available whenever needed. Stock is carried in many sizes — write for our Small Screw Stock List and free samples. *Send your prints for prompt quotation!*

WOOD SCREWS	THREAD-CUTTING SCREWS	STOVE BOLTS
MACHINE SCREWS	PHILLIPS AND SEMS SCREWS	CAP SCREWS
MACHINE SCREW NUTS	PIPE PLUGS	LAG SCREWS
TAPPING SCREWS	COLD HEADED PRODUCTS	DRIVE SCREWS
		SPECIAL SCREWS

REMEMBER ELCO SCREWS

WE ALSO SPECIALIZE IN MAKING ANY OF OUR PRODUCTS OF THE FOLLOWING MATERIALS

Stainless Steel	Copper	Monel
Bronze	Silicon Bronze	Aluminum
Brass	Ambrac	Special Analysis

ELCO TOOL AND SCREW CORPORATION
1946 BROADWAY • ROCKFORD, ILLINOIS

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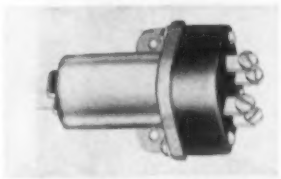
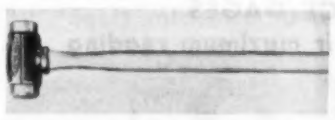
ELECTROMAGNETIC SWITCH
for heavy duty motor, heater loads



Actuated by a solenoid plunger, the Powerloid power type electromagnetic switch combines the characteristics of both relay and solenoid. Designed for heavy duty motor and heat loads, it has been tested for 230 v ac motor loads up to 3 hp and heater loads to 8400 w. Totally enclosed unit is offered in various contact combinations with screw and spade terminals as shown. Contact ratings are 3 hp motor load at 230 v, 60 cycles, 6000-w resistive load and 500-w tungsten lamp load. Coils are for standard voltages up to 230 v ac 60 cycles and up to 110 v dc. Made by **Guardian Electric Mfg. Co.,** 1621-I W. Walnut St., Chicago 12, Ill.

▲ For more details circle NED-318 C7 on enclosed inquiry slip ▲

RAWHIDE HAMMER
available with extra-long handle



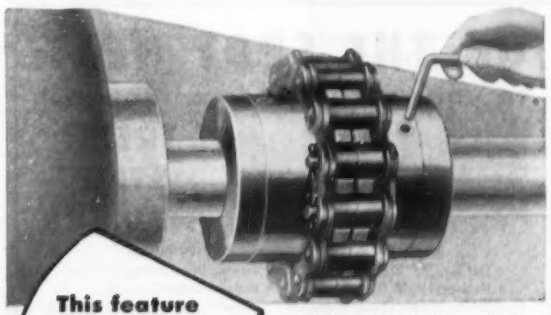
Rawhide headed hammer that will not scar, dent or mar surfaces is now available with an increased handle length of 20 in. Added length allows use as a sledge. It has a split head which facilitates changing the rawhide face, or a solid head with changeable tap-out rawhide face. Made by **Garland Mfg. Co.,** Water St., Saco, Me.

▲ For more details circle NED-319 C7 on enclosed inquiry slip ▲

TOOLMAKER'S MICROSCOPE
has built-in illumination

Tools, drill jigs, templates and finished parts can be inspected and measured with the Toolmaker's measuring microscope. Light from built-in source is directed down through microscope objective for true vertical illumination. A collective mirror under stage reflects light back into body tube. Thus, both surface and contour of part can be viewed at same time. Cross slide stage has range of 2 in. in "east-west" direction and 1 in. in "north-south" direction. Standard magnification is 35X, although with different objective and eyepiece combinations, other magnifications can be obtained. A 7/5X protractor eyepiece, and centers which can be aligned with cross-hair, are available. Base price is $1200. Made by **Bausch & Lomb Optical Co.,** 727 St. Paul St., Rochester 2, N. Y.

▲ For more details circle NED-320 C7 on enclosed inquiry slip ▲



This feature alone makes LINK-BELT "RC" flexible couplings a . . .

3-way BETTER BUY

EASY INSTALLATION is another Link-Belt advantage. Sizes from fractional to 1000 hp . . . ½ to 12-inch bores.

THIS exclusive *divided roller* feature combines single-width chain simplicity with double-width chain advantages. Benefits include (1) equalized load, (2) proper balance at high speeds, (3) compensation for end float and misalignment. Wide distribution assures ready availability from nearby stocks. Write LINK-BELT COMPANY, Prudential Plaza, Chicago 1, Ill., for Folder 2363.

LINK-BELT
"RC" FLEXIBLE COUPLINGS

14,195

▲ For more details circle NED-321 C7 on enclosed inquiry slip ▲

TUBING
SHEETS
TUBES
RODS

*DU PONT TRADE MARK

TEFLON*

MOLDED
EXTRUDED
MACHINED

Phone
AMherst 4-0250
or write

Allegheny Plastics, Inc.
15 THORN RUN ROAD
CORAOPOLIS, PA.

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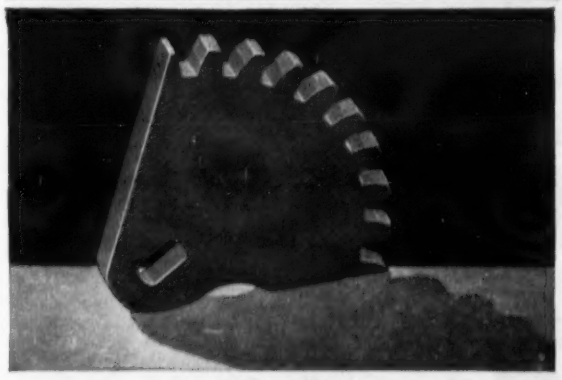


Accurate, Low Cost *STAMPED* Bakelite Gearing!

Now, WINZELER successfully *Stamps* and shaves with special tooling, Gearing from BAKELITE material up to 1/8" thick. Sizes, from 8 to 16 dp. Teeth are sharp, clean-cut, uniformly accurate. CUT COSTS. Check up on these tough, quiet, lightweight Gears today. Winzeler *Stamped* Metal Gears are now made from 8 to *120 dp.* Ideas, suggestions, low cost estimates do not obligate you.

SEND FOR *4-page Stamped Gear folder containing valuable Stamped Gear data and tables. Write today!*

WINZELER Stamped Gears

WINZELER MANUFACTURING & TOOL CO.
7355 W. WILSON AVENUE • CHICAGO 31, ILLINOIS

▲ For more details circle NED-323 C7 on enclosed inquiry slip ▲

MULTI-DUTY
AMERICA'S FAVORITE AUTOMATIC AIR FILTER SINCE 1928

The AAF MULTI-DUTY is the nation's most widely-used self-cleaning air filter, and *has been* for almost thirty years!

Multi-Duty does the job automatically. Continuous self-cleaning of its filter curtain assures both constant efficiency and uniform air delivery. Operating resistance remains fixed, and no attention is required other than the periodic removal of sludge.

For complete product information, call your local AAF representative or write direct for Bulletin 241.

American Air Filter
COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

▲ For more details circle NED-324 C7 on enclosed inquiry slip ▲

NOW CONVEY the MODERN Way... with SPENCER VACUUM

3,000 LBS. OF SAND PER HR. CONVEYED AT THIS KILN

Spencer Pneumatic Conveying, available in both stationary and portable systems, is quick, sanitary, dust-free . . . allows flexibility impossible with mechanical conveying. Sizes from 2 HP to 100 HP, capacities up to 10 tons per hour for handling any dry and free flowing materials in granular or pulverized form, including chemicals, foods, metals, minerals, ashes. Request Bulletin 143.

The SPENCER TURBINE COMPANY
HARTFORD 6, CONNECTICUT

For more details circle NED-325 C7 on enclosed inquiry slip

GAME ON WEBBING

Whether you are now buying a "standard" or a "special" webbing, we can probably save you a substantial amount. We have hundreds of sizes, widths, weights, solid colors and fancy patterns from which to choose. You'll save at any rate . . . if you find what other manufacturers consider a "special" among our selection of STANDARDS, you save DOUBLY. We are the biggest and oldest producer of cotton, nylon, dynel, dacron, jute, combed peeler mercerized and high tensile webbing.

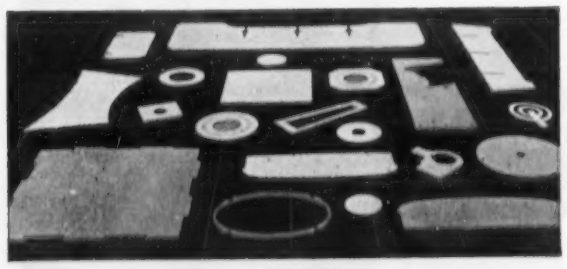
We also manufacture a complete line of WOVEN COTTON CONVEYOR BELTS and PURE SHEET RUBBER.

BUFFALO WEAVING and BELTING CO. INC.
210 CHANDLER ST. BUFFALO 7, N. Y.

write for samples and prices!

For more details circle NED-326 C7 on enclosed inquiry slip

1000 ways to cut costs



with fiber board parts and cut-outs

Upson fiber board is *not* a soft insulation board. Neither is it a hard board. Rather, it is an "in-between" board, composed of 94% wood fibers laminated for superior strength. It is tough, yet resilient, with superior finishing and sound deadening qualities. We manufacture it and precision-cut it to specified shapes. We punch it, bevel it, die cut it, waterproof it and apply special finishes; delivering the finished part *ready for production.* Choice of widths, lengths, thicknesses and surface textures. Tell us your problem. *Fiber board* with our specialized engineering and cutting service could be your answer. *Send this coupon for booklet of uses and samples.*

UPSON
94% WOOD FIBERS LAMINATED FOR GREAT STRENGTH

THE UPSON COMPANY, 163 UPSON POINT, LOCKPORT, NEW YORK

Please send me the Upson FREE Idea Book, "1000 Ways to cut costs and Improve Quality with Upson Fiber Panels and Cut-Outs", and Sample Kit.

Name
Position
Name of Company
Street City State

For more details circle NED-327 C7 on enclosed inquiry slip

METAL PARTS CLEANERS are pneumatically agitated

Pneumatically agitated models MPC-3 and 4 metal parts cleaners can be used cold, or supplied with steam, gas or electric heat. Adaptable to all solvents, alkalies and acidic solutions, machines have combination settings for washings, prewashings, rinsing and drying. A three-way control valve permits raising and lowering of work platform to waist level for easy loading and unloading. Machines can also be used for prepainting cleaning, post heat treat cleaning and quenching, wax coating and protective coating. Made by **Circo Equipment Co.,** Dept. P-1, 51 Terminal Ave., Clark, N. J.

For more details circle NED-328 C7 on enclosed inquiry slip

PRECISION FORCE GAGES will hold their maximum reading

Practical for making force measurements, both in tension and compression, Series D-M force gages will hold their maximum reading after load is removed. Maximum load capacities of 50, 100, 150 and 200 lb are offered. Single control button selects desired gage operation, either to hold reading, or to follow all load fluctuations. If maximum force has been recorded, gage is simply released and reset for next measurement by flick of control button. Accuracy is to within one dial division. Units have four interchangeable compression heads and an extension hook, all removable. Detachable handles latch easily into position for hand-held operation. Made by **Hunter Spring Co.,** Apparatus Div., Dept. NED, 1 Spring Ave., Lansdale, Pa.

For more details circle NED-329 C7 on enclosed inquiry slip

Testing Machine Line

Tinius Olsen Testing Machine Co.—40-page bulletin 54 details and specifies line of Electromatic universal testing machines of from 500 to 1,000,000-lb capacity. In these machines load is applied by electronically controlled mechanical system to assure positive cross-head speeds under load or no load. Compression and XY testers, electronic recorders, instrumentation and accessories are covered.

For more details circle NED-330 C7 on enclosed inquiry slip

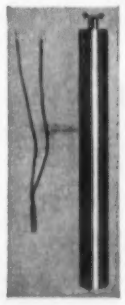
ON THE SPOT HEAT to your exacting requirements!

TRENT STRIP HEATERS

for Ovens, Dryers, Kettles, Process Equipment

- Flat Metallic Tube Casing
- Ceramic Block Terminal Blocks
- No Grooves—No Heat Distortion
- Sealed End Construction

Available in a complete range of types and sizes, wattage requirements, and voltage conditions—for maximum safe surface temperatures of 750°F. and 1000°F!



TRENT CARTRIDGE HEATERS

for Dies, Molds, Platens, Sealers, Defrosting

- Brass or Steel Sheath Construction
- Silver Soldered End Opposite Terminals
- Moisture and Wax Resistant
- Nickel Chromium Heater Coil Sealed in Ceramic Insulation
- Brass Angle, Pigtail, Rod, or Stud Type Terminals

Standard sizes from 3/8" to 1 5/16" diameter, and 1 1/2" to 22" in length, are supplied in a range of wattage requirements for 110 and 220 volt operation.

Discuss your spot heating requirements with a Trent representative.

Trent Representatives in Principal Cities Coast to Coast

TRENT INC.
Electrically Heated Industrial Equipment
242 LEVERINGTON AVE., PHILA. 27, PA.

For more details circle NED-331 C7 on enclosed inquiry slip

$2930 f.o.b. factory 16" x 6' Toolroom Lathe less electrical equipment

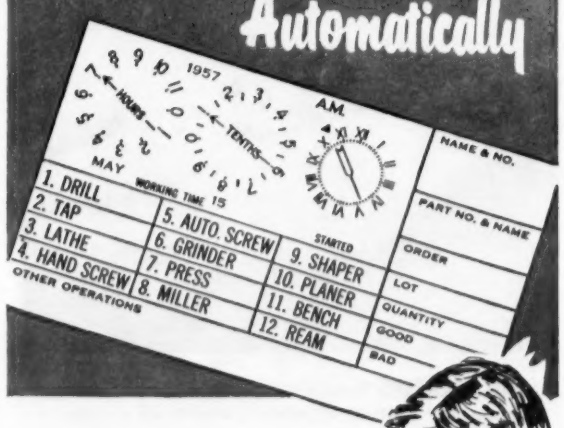
—A BETTER VALUE

Here is a lathe that will give you maximum return for every dollar invested. Versatile . . . highly accurate . . . easy to operate. It makes difficult close-tolerance jobs easier. Designed for hard industrial use, it will continue to turn out, year after year, the kind of precision work modern tooling demands. And you'll be surprised at the low maintenance cost. Prompt delivery — time payment terms available. Write for catalog.

SOUTH BEND LATHE
SOUTH BEND 22, IND. • Building Better Tools Since 1906

For more details circle NED-332 C7 on enclosed inquiry slip

Cost control begins with CALCULAGRAPH Automatically



No need to "just wish" you had accurate job cost records because with Calculagraph system you obtain these records automatically.

Calculagraph not only prints and records working time per worker per job but computes the *elapsed time* for every job card being recorded. That means, of course, that your costs are computed automatically. Also many workers may use the same Calculagraph computer.

Know the facts about your costs—do it with a Calculagraph system. Our representative can show you how.

Literature describing Calculagraph is yours for the asking. Just write to Dept. NE

Representatives in Principal Cities

CALCULAGRAPH Company
HARRISON, N. J.

DEPENDABLE ELAPSED TIME COMPUTERS SINCE 1893

For more details circle NED-333 C7 on enclosed inquiry slip

CLOTH BAG DUST FILTERS
for individual machines

These complete, compact Sly "Unit" Dust Filters offer many economies in limited capacity ranges for the purpose of collecting dust from grinding, sanding, screening, mixing, pulverizing, packaging and finishing operations.

Often several of these units are employed in preference to a single large collector, for greater flexibility of operation, to save piping, and to keep different materials separate.

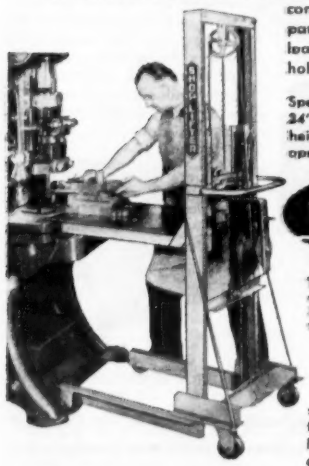
When you choose your dust collector be sure to get plenty of cloth for the air volume to be filtered. Never install a collector with less than a square foot of cloth for each four cubic feet of dust-laden air. Buy Sly—be safe.

Sly "Unit" Filters are engineered to assure long-time operating efficiency. Low cost, compact, easy to install. Made by **The W. W. Sly Manufacturing Co.**, 4748 Train Avenue, Cleveland 1, Ohio—since 1874 pioneer and leader in dust control . . . original patentee of the cloth-type filter. Experienced Sly engineers in principal cities. Advt.

▲ For more details circle NED-334 C7 on enclosed inquiry slip ▲

500 lb. Lifter-
NOW $210 f.o.b. Chicago

Pays for itself over and over again in time saved and by avoiding lifting injuries in moving dies, machine parts and stacking. Can be used as adjustable height work table. Rugged, simple construction, with few moving parts, has high safety overload factor. Automatic clutch holds load at any height.



Specifications: platform 24" x 24", lifting height 4' 6". Overall height 6' 0". Width 24". Foot operated floor lock.

SHOPLIFTER

This sturdy, general purpose lifter makes it easy for one man to handle lifting jobs quickly and with complete safety.

Order Today—
Free Trial

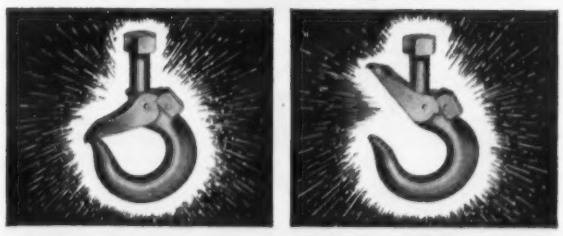
specify 10 day free trial, with full credit return privilege. 1000 lb. and 2000 lb. Shoplifters also available.

ECONOMY ENGINEERING 4519 W. Lake St. Chicago 24 Illinois

▲ For more details circle NED-335 C7 on enclosed inquiry slip ▲

• Positive Locking • Won't Snag
• Unobstructed Throat Opening

COFFING Safety Hook*



The strong, rust-resistant Coffing Safety Hook provides complete protection against slipping of the load support, without obstructing the throat opening. The latch is held in both open and closed positions by a positive locking action and cannot be moved unless released. In the open position the latch is completely clear of the throat opening, and closed it permits use of the entire hook area.

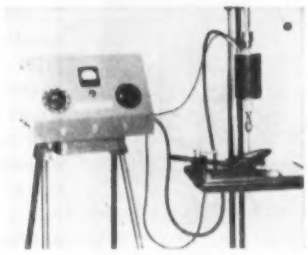
Safety Hooks are available in capacities up to three tons, and may be specified for new hoists (at slight extra cost) or purchased for hoists already in service. For complete information consult your distributor, or write to Coffing Hoist Division, Duff-Norton Co., 803 Walter Street, Danville, Ill.

** Patent No. 2,706,318*

COFFING HOIST
DIVISION OF **DUFF-NORTON COMPANY**

▲ For more details circle NED-336 C7 on enclosed inquiry slip ▲

METAL DISINTEGRATOR
cuts shaped holes in hard metals



Curved or other shaped holes can be made in such hard metals as carbides, titanium, permanent magnets cast alloys, armor plate, tungsten and Stellite by the C-56 electric arc-type metal disintegrator. Designed for removing broken taps, reamers, studs and set screws, it can also be used for cutting dovetails in hardened dies and tools, centering holes in taps, internal and external keyways and slots, oil holes and pilot holes. Machine, used with any drill press, features a voltage selector, automatic cut-out and integrating head which is adjustable to any angle. Made by **Cammann Mfg. Co.**, Dept. N, 2700 Henninger Rd., Cleveland 9, O.

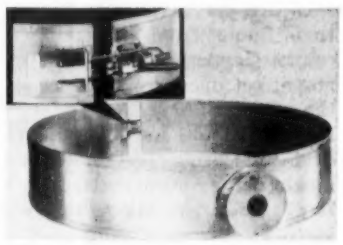
▲ For more details circle NED-337 C7 on enclosed inquiry slip ▲

GAS SOLDERING TORCHES
melt solder in 90 seconds

Air and gas flow can be regulated by the operator of these internally fired soldering irons to obtain the heat desired. Flame is controllable from high heat input for rapid warm-up and continuous heavy work down to low heat input for standby and light work. The 2 and 5-lb irons are capable of melting solder 90 seconds after lighting. Tip reaches 1000° F in 3½ minutes. Made by **Insto-Gas Corp.**, Dept. NED, 998 E. Woodbridge Ave., Detroit 7, Mich.

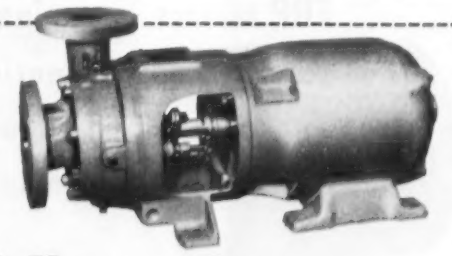
▲ For more details circle NED-338 C7 on enclosed inquiry slip ▲

DRUM HEATER
115 and 230-v, three-heat models



Contents of standard 55-gal, 22¼-in. diameter steel drums can be heated to facilitate their removal from the container by the model RH-1 Acrawatt drum heater. It has a quick-action toggle clamp, built-in three-heat switch and wiring circuits for uniform heating. The 3000-w, 230-v and 2500-w, 115-v units have a 5-in. wide sheath of aluminized steel with nickel chromium resistors insulated with sheet mica. Three settings of 100, 50 and 25 per cent of maximum wattage provide average sheath temperatures of about 590, 350 and 175° F, respectively, when applied to a filled drum. Made by **Acra Electric Corp.**, 9909-A Pacific Ave., Franklin Park, Ill.

▲ For more details circle NED-339 C7 on enclosed inquiry slip ▲



full capacity pumping power

There's maximum performance with space-saving compactness in the design of Ingersoll-Rand's Motorpump. Capacities from 5 to 2800 gpm . . . heads to 650 feet. Easy installation. Precision manufacturing means dependable, smooth operation.

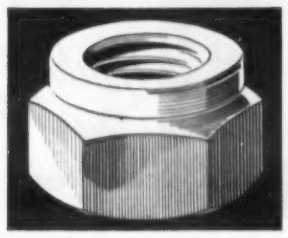
For your liquid-moving problems . . . Send for I-R's catalog on Motorpumps.

Ingersoll-Rand
11 Broadway, New York 4, N.Y.

9-498

▲ For more details circle NED-340 C7 on enclosed inquiry slip ▲

Specify standard FLEXLOC® microsize locknuts



- One-piece, all-metal construction
- Resilient locking section
- Controlled locking torque
- Lock and stop nut in one
- Every thread carries its full share of the load
- Made to Class 3B fit

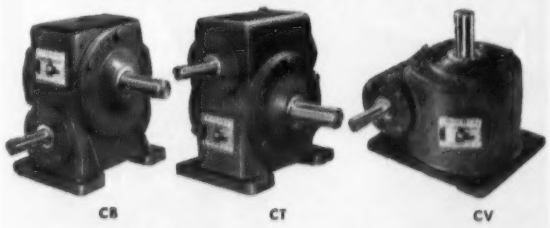
Smaller than regular FLEXLOCs of the same nominal diameter, FLEXLOC microsize locknuts make possible smaller mating joints and flanges. Standard materials are brass (plain or cadmium plated) and aluminum (plain or chemically treated), for temperatures to 250°F; alloy steel and 18-8 stainless steel, for temperatures to 550°F. They are available in sizes #0 through #4 at your industrial distributor's. See him for details. Or write for literature, samples, information on other materials. Flexloc Locknut Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
FLEXLOC® LOCKNUT DIVISION SPS JENKINTOWN PENNSYLVANIA

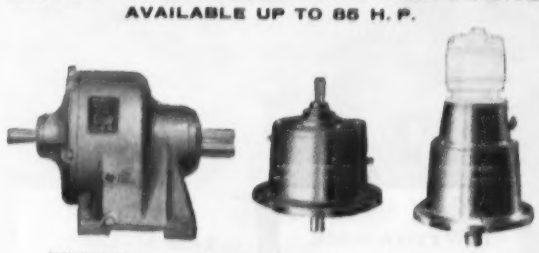
▲ For more details circle NED-341 C7 on enclosed inquiry slip ▲

VERSATILE PERFORMANCE for your BIG JOBS, too, in SPEED REDUCTION

WINSMITH WORM GEAR REDUCERS
AVAILABLE UP TO 34 H. P.



WINSMITH DIFFERENTIAL REDUCERS
AVAILABLE UP TO 85 H. P.



● The stock line of Winsmith Speed Reducers offers a wide variety of rugged, heavy duty units designed to handle *all your* speed reduction problems involving high input horsepower. Worm gear reducers are available in horizontal or vertical types, with right angle or parallel shafts . . . worm on top or worm on bottom. The Winsmith Differential line offers equal versatility with three stock types—Horizontal, Flange Mounted, or Vertical Motorized.

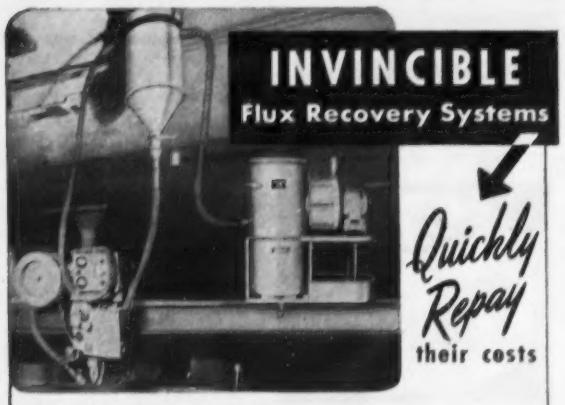
It will pay you to standardize on Winsmith — the most complete line for all your speed reduction jobs — big or small — from 85 h.p. down to 1/100 h.p.

COMPLETE ENGINEERING DATA on hundreds of types and sizes of Winsmith reducers is included in Catalog #155 — write for your copy today.

WINSMITH® SPEED REDUCERS

WINSMITH, INC.
119 Eaton Street, Springville, (Erie County), N. Y.

▲ For more details circle NED-342 C7 on enclosed inquiry slip ▲



INVINCIBLE
Flux Recovery Systems

Quickly Repay their costs

Automatic, continuous-flow Flux Recovery System

On submerged arc welding jobs, Invincible Flux Recovery Units save money by: **1** Salvaging *all* unfused flux, **2** Operating far more efficiently than manual methods, **3** Reducing welding rejects by removing all fine dust (flux flour).

Write for FREE FOLDER on FLUX RECOVERY SYSTEMS

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

For more details circle NED-343 C7 on enclosed inquiry slip

New Triner Automatic PARCEL POST SCALE

The TRINER *Imperial*

70 lb. capacity

Speed Mail Room Operations

NEW EXTRA LARGE, EYE-LEVEL, COLOR BAND CHART

FAST, ACCURATE READINGS THAT STOP COSTLY POSTAGE ERROR

Vertical color bands guide the eye for virtually instantaneous postage computation. The numbers are large, easy to read and the positive quick stopping knife indicator eliminates the possibility of error from "angle" readings. Famed Triner twin pendulum gravity system . . . no springs . . . assures money-saving accuracy. And there's new beauty, new construction features. Get the facts.

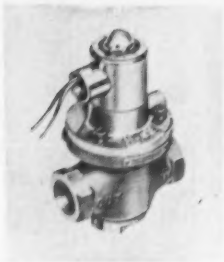
Write for Booklet

Over 200,000 TRINER SCALES are used by the U.S. POST OFFICE. Triner is also the scale most used by leading mail order houses. There's a Triner scale for every mailing requirement.

TRINER SCALE & MFG. CO.
2716 W. 21st Street • Chicago 8, Illinois

For more details circle NED-344 C7 on enclosed inquiry slip

AIR CONTROL VALVES
five pilot heads fit seven bodies



Thirty-five major model combinations are possible with five pilot heads that are interchangeable on seven valve bodies in Starline series of air control valves. Available pipe sizes increase number of combinations to 210. White Star valve has a spool solenoid pilot head and any of seven valve bodies. Gold Start valve consists of one of the seven bodies operated by a large capacity pilot section actuated by an oil immersed solenoid. Blue Star group includes all remote piloted, pressure operated valves, with master valve for immediate and timed actuation and reversal. Seven bodies are straight way, normally open and normally closed; three-way, open and closed (in-line series); and three-way, normally open and normally closed; and four-way (base-mounted series). Made by **Ross Operating Valve Co.**, Dept. NED, 120 E. Golden Gate Ave., Detroit 3, Mich.

For more details circle NED-345 C7 on enclosed inquiry slip

FORCED AIR SPACE HEATER
nine sizes range from 250,000 to 2 million Btu per hour capacity

Induced draft Pyro-Jet burner employed in Counterflo direct-fired forced air space heaters is suited for gas, light oil, heavy oil or combination gas/light oil firing. Manually or thermostatically - operated switch effects instant fuel changeover. Gas ports and oil nozzles are so arranged that flame from one cannot impinge upon, nor affect operation of the other. For heavy No. 5 fuel oil, burner employs air atomization and dual preheating system to provide hot oil right at nozzle before burner attempts to light off. Based on 75° F heat rise, fan motor requirements range from ½ to 7½ hp, depending upon size of heater.

Separate furnace and circulating fan sections provide flexibility in matching fan requirements with output capacities. All models have forward-curved, slow speed, double inlet fans with shafts sized for ample safety factor. Single fan units are used in up to 350,000 Btu heaters, while larger units have dual fans. Heaters from 750,000 to 2 million Btu output have totally enclosed burner compartments with access doors. Made by **Dravo Corp.**, Dept. NED, Neville Island, Pittsburgh 25, Pa.

For more details circle NED-346 C7 on enclosed inquiry slip

FHP motors . . . engineered especially for your product

The new RAE M-20 or M-100 Motor. Ventilated or enclosed. Designed for quality but not expensive. Strong, rugged casting. Ball or sleeve bearings. Can be used with any of RAE's gear units.
Winding —
M-20 — Universal or Shunt
M-100—Permanent Magnet (DC Shunt)
Voltage — 6 to 220 AC/DC or DC Shunt
Max. H. P. — 1/30 Continuous
Weight — Approx. 2 lbs.

RAE motors

RAE engineers are recognized specialists in solving difficult FHP motor applications. By careful analysis and testing of your product, they can save you time and money in selecting the right motor.

RAE offers outstanding service and quality in a large variety of motors. Available in voltages up to 250, and up to 1/6 H.P. (higher for intermittent duty) with many gearhead motor combinations.

Find out how RAE motors can *improve your product* and *reduce costs* as they are doing for other leading manufacturers.

*Send for the "RAE" Engineering Data Sheet. It will help you supply the data necessary for recommendations and prices.

Rae MOTOR CORP.
2009 Kewaunee Street
Racine, Wisconsin

AC/DC Universal • DC Shunt Wound • DC Series Wound • Gear Reduction Motors • Governor Controlled Motors • Motors for Rheostat Control • Motors for Electronic Control • Permanent Magnet Motors and Gearmotors.

For more details circle NED-347 C7 on enclosed inquiry slip

Aero-Seal
THE STAR OF HOSE CLAMPS

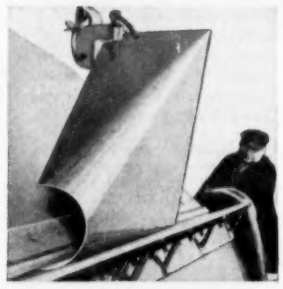
In hose clamps, the *quality* name today as always is AERO-SEAL. We pioneered the famous precision worm gear and engineered the *extra strength* and holding power. Other clamps may LOOK like AERO-SEALS, but take a *second* look! Compare quality with price cuts and special discounts. Which pays off best? Compare the worm gear construction. Note that AERO-SEAL worms don't wobble. Look at the special rugged interlocking feature that makes AERO-SEALS hold tight — no spot welding. Note the precision gear that applies uniform pressure — does not pinch hose. Stainless steel bands, complete size range for dozens of fastening uses. Insist on genuine AERO-SEALS.

For added quick-attach advantage, get AERO-SEAL Jets. Nothing like them!

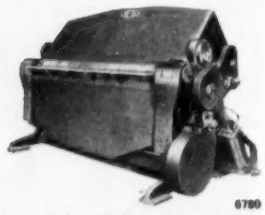
Aero-Seal REGULAR WORM GEAR HOSE CLAMPS
BREEZE CORPORATIONS INC. 700 Liberty Ave., Union, N.J.

For more details circle NED-348 C7 on enclosed inquiry slip

Bending Steel Plates for WELDMENTS?
do it economically with
CHICAGO® BENDING BRAKE



The elimination of die costs and the ease of changing from one job to another make the CHICAGO bending brake the economical method for bending steel plates for weldments. An automatic stop regulating the degree of bend assures duplication on successive pieces.



Many standard sizes are available with capacities for bending mild steel up to 12 feet by ¼ inch or 16 feet by ½ inch.

6780

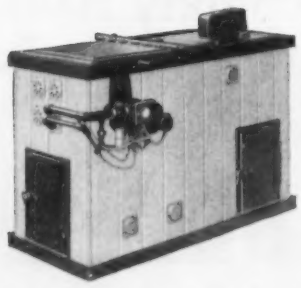
For details on how to do it, ask for Bulletin P-55

CHICAGO DREIS & KRUMP
Press Brakes • Straight-Side-Type Presses • Press Brake Dies
Hand and Power Bending Brakes • Special Metal-Forming Machines

DREIS & KRUMP
MANUFACTURING CO.
7436 South Loomis Boulevard, Chicago 36, Illinois

For more details circle NED-349 C7 on enclosed inquiry slip

INDUSTRIAL INCINERATOR FEATURES SMOKELESS AND ODORLESS OPERATION



Bowser, a completely automatic incinerator, disposes of all burnable industrial waste, minimizing smoke and odor. Destruction is thorough, leaving little ash residue. The virtually smokeless and odorless operation is attained by a venturi action. Controlled air is drawn in to provide oxygen for accelerated combustion in a secondary chamber. This produces very high temperatures, completely burning combustible gases and eliminating odors.

Bowser incinerator eliminates costly trash problems, cuts disposal costs, saves space and reduces fire hazards. Utilizes natural, manufactured, mixed or LP-gas.

Three models are available with capacities up to 200 lbs. per hour.

Write for free Catalog

BOWSER, INC., INCINERATION DIVISION
Factory—CAIRO, ILLINOIS
Sales Offices—1335 W. RANDOLPH ST., CHICAGO, ILL.

For more details circle NED-350 C7 on enclosed inquiry slip

make hardness tests
ANYWHERE

with this lightweight, portable
NEWAGE TESTER

- no clamps, no jaws
- no restrictions to size, shape or type metal
- no calculations or conversions
- no skill required
- accuracy guaranteed by individual calibration

available in scales corresponding to Rockwell and Brinell

Test any size, shape or type of metal anywhere! Use the versatile, 30 oz., portable, precision NEWAGE tester and eliminate the time, trouble and labor of getting work to a bench tester. Just press the hand grips and get answers in 30 seconds—inside or outside the plant, office or laboratory.

Write today for demonstration or booklet

NEWAGE INTERNATIONAL, INC.
222 OLD YORK ROAD • JENKINTOWN, PA.
Suburb of Philadelphia

For more details circle NED-351 C7 on enclosed inquiry slip

SELF-SEALING SCREW
has O-ring in groove under head

Combination sealing and locking, even when vibration is encountered, is achieved in cabinet or enclosure construction with use of Seelskrew self-locking screws. These standard machine screws have an O-ring pressed into a groove under the head. Tightening the screw on a panel or housing compresses the O-ring to create a vibration-resistant and high pressure seal. O-rings resist petroleum products, weathering, salt water, sunlight and high temperatures. Made by **Automatic & Precision Mfg. Co.,** Dept. NED, 252 Hawthorne Ave., Yonkers, N.Y.

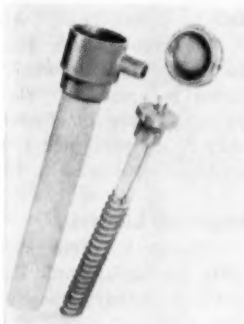
For more details circle NED-354 C7 on enclosed inquiry slip

SUBSURFACE THERMOCOUPLE
spring holds tip against surface

Subsurface temperature measurements can be made by the type J spring-loaded thermocouple where it is essential for contact to be maintained. Spring of Inconel-X holds the couple tip against the work surface. Unit is suited for temperature measurement of plastic extrusion machines, generator bearings and dynamo end plates. It is available as a straight or 90-degree angle type, with optional bayonet adapter for easy removal. Made by **Minneapolis-Honeywell Regulator Co.,** Industrial Div., Wayne & Roberts Aves., Philadelphia 44, Pa.

For more details circle NED-355 C7 on enclosed inquiry slip

IMMERSION HEATERS
fused silica element is replaceable



Only the fused silica element need be replaced in case of a burnout in Pyrosil immersion heaters. Indefinite use of the quartz shell and acid resistant boot and cap are possible. Heater is explosion-proof as it breathes constantly through the junction box lead-in conduit. Four sizes use the same shell, boot and cap, elements being changed to obtain different kilowatt ranges. Shell withstands mechanical shock. Standard sizes and specials are available. Made by **Pyrosil Inc.,** Dept. N-101, Cuyahoga Falls, O.

For more details circle NED-356 C7 on enclosed inquiry slip

Permaglas
STORAGE UNITS
for safe, economical storage of bulk materials

Air-tight, moisture-tight, vermin-proof—Permaglas Storage Units fill the need for the *perfect* means of storing almost any material in bulk form.

When equipped with the optional and exclusive mechanical sweep-arm bottom unloaders, Permaglas structures can be used to store materials which, heretofore, have been thought impossible to bin. Any tendency of materials to bridge or pack is of no consequence. With these unloaders, interbatch uniformity can be secured by using them to draw uniformly from silos charged with different batches or mixtures.

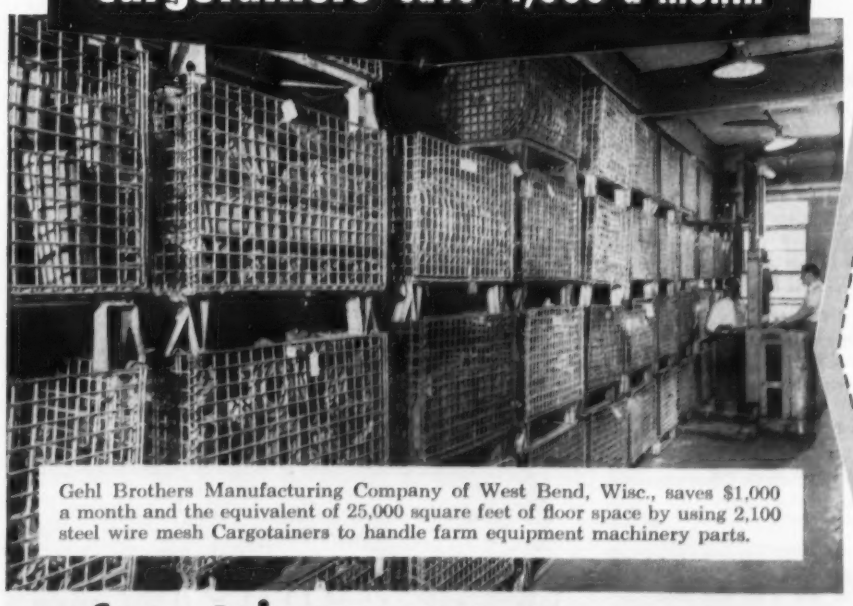
Maintenance expense just doesn't exist for Permaglas Storage Units. Made of glass coated steel, coated inside and out, they are impervious to weather, to almost any kind of acid condition, and they never require painting. Their appearance will always be a credit to any plant.

Permaglas is manufactured by A. O. Smith... distributed exclusively by Sprout-Waldron—makers of the most advanced equipment for complete materials handling systems. Write for details.

SPROUT-WALDRON
Manufacturing Engineers Since 1866
8 LOGAN ST. • MUNCY, PA.
IN/424
Equipment for SIZE REDUCTION • MIXING & BLENDING • BULK MATERIALS HANDLING • PELLETING & CUBING • PRODUCT CLASSIFICATION

For more details circle NED-352 C7 on enclosed inquiry slip

Cargotainers® save $1,000 a month



Gehl Brothers Manufacturing Company of West Bend, Wisc., saves $1,000 a month and the equivalent of 25,000 square feet of floor space by using 2,100 steel wire mesh Cargotainers to handle farm equipment machinery parts.

Cargotainers *by* **Pittsburgh Steel Products**
a division of **Pittsburgh Steel Company**
1407 Grant Building • Pittsburgh 30, Pa.

Cargotainer *advantages*

- Support Heavy Loads—Up to 6,000 lbs.
- Reduce Storage Space—Use air space, not floor space. Can be stacked.
- Provide Visual Inventory—Material is easy to locate and count.
- Collapsible—Five folded take same space as one unfolded.
- Stay Clean—Dirt and dust have no place to accumulate.
- Can Be Used for All Kinds of Materials from steel castings to smoked hams.
- Duty-Designed—A type and size to fit your requirements; if not, we will design one for you.
- Versatility In Handling—Can be equipped for handling with most power or manually operated handling equipment.
- Long Lasting—Will give years of trouble free service.

For more details circle NED-353 C7 on enclosed inquiry slip

R&M HOISTS • CRANES • WINCHES

LOW PRICE ELECTRIC CHAIN HOIST

capacities to 2000 lbs.
lifts up to 60 ft.
prices start at $207.00

Robbins & Myers quality throughout, JC chain hoists are available from stock now, at new low prices! Features include: Special R & M hoist motor—Unit cast aluminum frame—Weston-type load brake—Sealed bearings throughout—Welded alloy steel link chain—Forged steel hook—Speed choice 34, 17, or 9 f.p.m.—Pendent rope control—Hook or trolley mounting. Write for Bulletin No. 852-B.

take it up with
ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO BRANTFORD, ONTARIO

For more details circle NED-357 C7 on enclosed inquiry slip

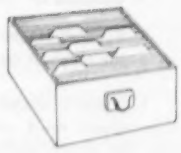
REULAND
HYDRAULIC PUMP MOTOR
features SPLINE-COUPLED hook-up!

INSTALLS IN 1/10 ORDINARY TIME—ALWAYS IN PERFECT ALIGNMENT

You can hook up a Reuland motor and any standard make hydraulic pump in a matter of only seconds. All you have to do is slip the spline coupling onto the motor's spline shaft and attach the pump flange to the endbell.

Absolutely perfect alignment is assured. There is no tinkering around with a mounting platform and your finished job always has a sleek, well-designed appearance. For all pumps. Coupling supplied with motor.

A Typical Example From the Free
REULAND SPECIAL-MOTOR LIBRARY!



Don't ever pay for special-motor development before you check this valuable library. Contains data on hundreds of unique motors—one of which may already be made-to-order for your needs. Originally designed for special uses, now available as standard motors to help you save expensive development work and put you in production faster. WRITE FOR YOUR FREE BOOKLET ON HOW TO USE THIS VALUABLE LIBRARY!

Other **REULAND** *firsts!*

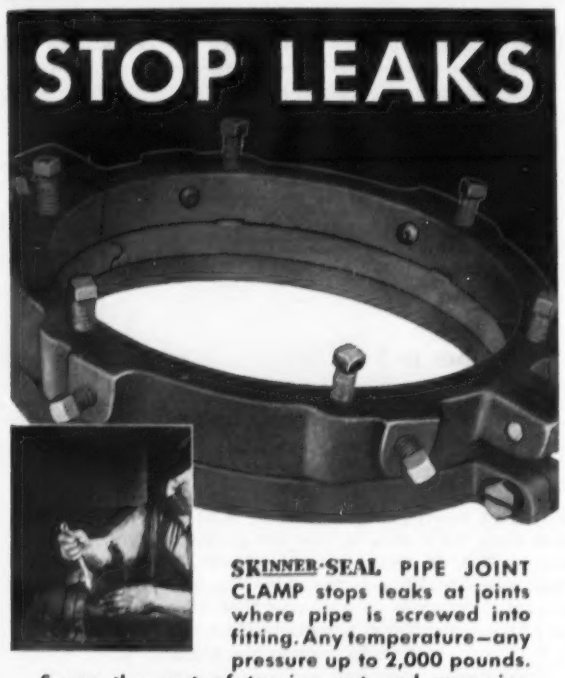
- Motor with internal fluid coupling
- All-aluminum motor frames
- "Through-Shaft" magnetic disc brakes
- Foot mounted magnetic disc brake complete with bearings and shaft
- Precision motors for machine tools

Free general catalog of the COMPLETE Reuland line of Standard and Special Motors sent on request.

REULAND MOTORS
REULAND ELECTRIC COMPANY
Western Division: Alhambra 75, California
Eastern Division: Howell 75, Michigan
Distributors in all principal cities

For more details circle NED-358 C7 on enclosed inquiry slip

STOP LEAKS



SKINNER-SEAL PIPE JOINT CLAMP stops leaks at joints where pipe is screwed into fitting. Any temperature—any pressure up to 2,000 pounds. Saves the cost of tearing out and renewing leaky fittings. Prevents shutdowns. Order from your local industrial distributor!

M. B. SKINNER CO., South Bend 21, Ind. — Established 1898

For more details circle NED-359 C7 on enclosed inquiry slip

Give your product the EXTRA dependability of

P&S 3-WIRE GROUNDING DEVICES

MODERN DESIGN FEATURES . . .

- Compact, square bodies—small size leaves ample wiring room in box.
- Designed for side or back wiring.
- Extra-sturdy plastic parts; extra-heavy metal parts—for the roughest use.

You can't afford to compromise with quality. Each component must measure up to the standard you've set for the entire unit. That's why so many manufacturers insure the inherent quality of their products by specifying P&S – the finest line of modern wiring devices.

Every P&S device offers not just superb craftsmanship and advanced design, but the dependability, durability and performance earned by over 65 years of leadership in the wiring device industry.

Whatever your needs in specification wiring devices, you're sure to get complete satisfaction . . . *extra dependability* from the complete quality line – P&S.

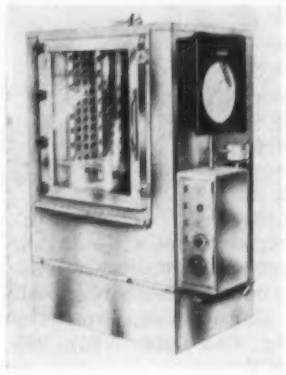
FREE CATALOGS!

Write today for further information to Dept. NED-18

PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK
60 E. 42nd St., New York 17, N. Y. 1229 W. Washington Blvd., Chicago 7, Ill.
In Canada: Renfrew Elec. & Refrig. Co., Ltd., Renfrew, Ontario

For more details circle NED-360 C7 on enclosed inquiry slip

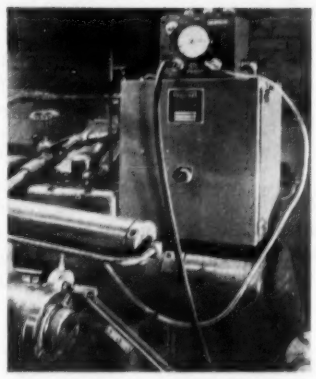
TESTING OVEN for temperatures to 100° C



Infinite temperature and humidity control, adjustable to any point to 100° C, can be achieved with model 8091 mechanically convected environmental testing oven. Designed for industrial or laboratory testing of chemicals, plastics, metals, electrical insulations and packaging, oven holds set temperature within ±½° C. Features include two-pen indicating recorder, sealed-in triple-pane window, built-in water filter, replaceable silicone gasket and a continuous supply of conditioned water. Humidity is developed by combination of atomization and vaporization of water. Made of stainless steel throughout, oven has a 24 x 20 x 30-in. interior. Made by **Electric Hotpack Co.,** 5063 Cottman St., Philadelphia 35, Pa.

For more details circle NED-361 C7 on enclosed inquiry slip

CONTINUOUS MEASURING GAGE for centerless grinding machine use



Output of various types of centerless grinders is continuously measured by the series 493-CG gage which also visually indicates any trend toward out-of-tolerance work. Adjustable delay response ignores local irregularities, enabling device to respond to workpiece size only. Visible or audible signal indicates production trend, signalling operator before any oversize or undersize work is produced. Indicating dial is graduated in 0.000050-in. Air-electric gage normally has an air snap gaging head with various size spacing blocks for various work sizes. Air ring gaging head shown is optional. Both types provide noncontact gaging. Made by **Federal Products Corp.,** 1118NR1 Eddy St., Providence 1, R. I.

For more details circle NED-362 C7 on enclosed inquiry slip

Industrial Lighting

Sylvania Electric Products Inc.—28-page booklet V-501 on industrial lighting considers safety and visibility factors; standards for use in prescribing plant lighting; uses of fluorescent, incandescent and mercury vapor lamps; lighting other areas; and maintenance. Another section provides condensed data on fixtures.

For more details circle NED-363 C7 on enclosed inquiry slip

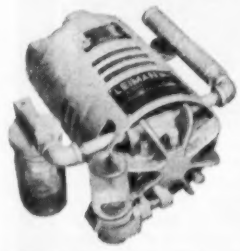
Reznor Manufacturing Co., 41 Union Street, Mercer, Pa.

For more details circle NED-364 C7 on enclosed inquiry slip

For more details circle NED-365 C7 on enclosed inquiry slip

If your VACUUM or PRESSURE requirements are in this range...

Vacuums to 27" Hg.
Pressures to 20 psig.
Displacement: 3.6 to 7.2 c.f.m.



...save space — simplify mounting—eliminate troubles —improve operation with

LEIMAN
INTEGRAL ROTARY AIR PUMP and MOTOR

MODEL K. 3.6 c.f.m. ⅓ hp. 13½" long—12" wide—7" high
MODEL K3. 7.2 c.f.m. ½ hp. 16" long—15" wide—9" high

AUTOMATIC WING ADJUSTER
Patented Leiman feature adjusts automatically, pushes steel wings into contact with cylinder wall, assures constant seal, prevents wings from sticking or binding.

FEATURES INCLUDE: Steel wings for long wear—automatic wing adjuster—ball bearings—automatic oiler—fan cooling—noiseless operation—automatic thermal overload protection for motor—inlet filter and outlet separator—oil-free air. Plus—famous Leiman dependability and lifetime performance.

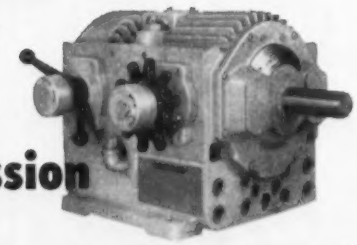
Write for 12-page catalog giving details

LEIMAN BROS., Inc.
167 Christie St., Newark 5, N. J.

For more details circle NED-366 C7 on enclosed inquiry slip

Increase your product's versatility... with the standard features of the

Gerotor Variable Speed Transmission



- ✓ Infinitely variable speed in both directions (0-1500 R.P.M.)
- ✓ Constant or variable torque or horsepower
- ✓ Smooth power flow at slowest speeds
- ✓ Highest torque in low speed range
- ✓ Quiet running and long life
- ✓ Dynamic braking with overload protection
- ✓ Adaptable to our full line of remote or automatic controls
- ✓ Delivery—Stock, plus factory test

Send for descriptive literature today, or send your problem direct to:

GEROTOR MAY CORP.

Manufacturers of: Hydraulic Pumps and Motors • Variable Speed Hydraulic Transmissions • PneuBin - pneumatic bin evacuators

OWINGS MILLS, MARYLAND

For more details circle NED-367 C7 on enclosed inquiry slip

SMOOTH
but plenty tough!

WENDT-SONIS tools cut fast and clean . . . stay sharp

The difference is in the finish!
All Wendt-Sonis drills, reamers, counterbores and other round tools are 30% smoother by profilometer readings. Flo-Finish, an extra operation applied after final grinding, practically eliminates grinding marks.

30% smoother Flo-Finish reduces chip friction — permits faster chip flow away from cutting edges — faster feeds and speeds. Lower chip friction also means less tool-damaging heat with a resulting increase in tool life. In addition, less power is required, and work finish is improved — in some cases by an average of 50%.

Micro-photograph (right side) shows how Flo-Finish eliminates grinding marks.

For detailed information on Wendt-Sonis tools, for competent technical assistance on tooling problems, see your Wendt-Sonis distributor's salesman.

Send for free 94-page Catalog No. 55— Address Dept. NED-357

WENDT-SONIS COMPANY
HANNIBAL, MISSOURI • ROGERS, ARKANSAS

For more details circle NED-368 C7 on enclosed inquiry slip

Are you doing any manual arc welding?

• When welding *stainless, low alloy, aluminum, nonferrous* you'll save time and money . . . eliminate many problems with ARCOS Electrodes. Here's why: A wide electrode selection assures the right type and grade for every job. Arcos quality—tops in the field—gives you superior weld metal for sound, uniform welds.

FREE . . . Filler Metal Chart

Send today! It lists ARCOS Rods and Electrodes . . . forms available . . . type metals to be welded . . . suitable welding methods.

ARCOS CORPORATION
1500 South 50th Street • Philadelphia 43, Pa.

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HERE'S
IMPORTANT
GEAR NEWS!

See how you can get increased gear life and greater capacity in less space . . . with the hardest, toughest, most accurate industrial gears made . . . and reduce costs at the same time!

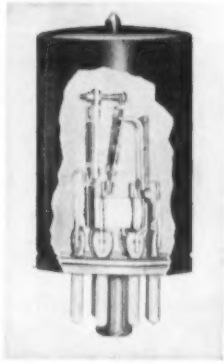
Get More

Send for this free folder now!
FOOTE BROS. GEAR AND MACHINE CORPORATION
4545 S. Western Blvd., Chicago 9, Ill.
Dept. NE

FOOTE BROS.

For more details circle NED-370 C7 on enclosed inquiry slip

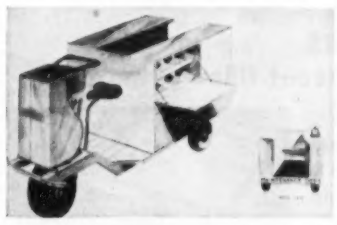
THERMAL TIME DELAY
unaffected by ambient change



This Thermal Memory relay is a bistable time delay relay with single-pole double-throw snap-action contacts. It is temperature compensated throughout an ambient range of −55 to 100° C. Operating time is preset for either 20 or 30 seconds, and it uses separate heater circuits to control each operation of contact arm. Standard ratings are 6.3, 26.5 or 117 v ac or dc, and contacts have 230-v 3-amp rating. Made by **Curtiss-Wright Corp.**, Electronics Div., 630 Central Ave., Carlstadt, N. J.

For more details circle NED-371 C7 on enclosed inquiry slip

MAINTENANCE TRUCK
has work bench with drawer space



Work bench, with ample drawer and compartment space to hold a complete assortment of tools is part of this Multiton - Excelsior maintenance truck. Powered by 2½-hp Briggs & Stratton engine, truck is fast enough to be an effective trouble shooter for yard and inter-building use, yet compact enough for maintenance jobs inside the shop or factory. Both gasoline and LP-fuel models are available. Made by **Stokvis-Edera & Co.**, Dept. NE, 18 Secatoag Ave., Port Washington, N. Y.

For more details circle NED-372 C7 on enclosed inquiry slip

INSTRUMENT AIR DRYER
desiccant-type operates at 100 psi

Consisting of head, case and Sovabead desiccant cartridge, this Air Dryer removes water vapor from compressed gases serving liquid level gages, louver and damper operators, air valves and other pneumatic equipment. It provides dew point of −60° F or lower, can be used at gage pressure of 100 psi and has capacity of 60 scfh at 70° F. Blue saturation indicator turns pink when cartridge needs changing. Case and head are brass and bronze, with inlet and outlet threaded to ¼-in. NPT. Made by **King Engineering Corp.**, Box 645, Ann Arbor, Mich.

For more details circle NED-373 C7 on enclosed inquiry slip

LONG LASTING
Spaulding
VULCANIZED FIBRE RECEPTACLES

CUT MATERIALS HANDLING REPLACEMENT COSTS

These are the reasons why:

DURABILITY—resistant to oils, greases, rust and corrosion.

TOUGHNESS—withstands impact and abrasion.

SMOOTH—won't splinter or chip.

In all standard sized boxes, barrels, trays, baskets and trunks or custom-made to your specifications.

Spaulding FIBRE RECEPTACLES

SEND FOR FREE CATALOG

SPAULDING FIBRE COMPANY, INC., Dover, N. H.
Please send me your free catalog on Spaulding's complete line of Vulcanized Fibre Receptacles for materials handling.

Name
Firm
Address
City Zone State

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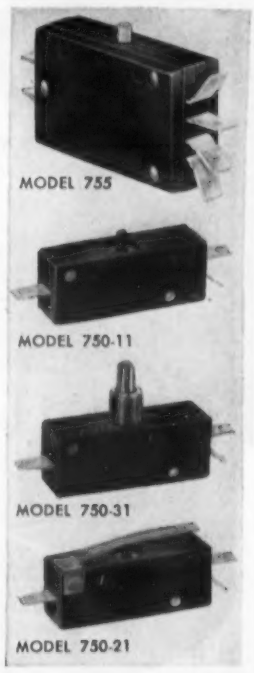
NEW SORENG "SNAPAC" Switch Line Offers:

RUGGEDNESS, HIGH CAPACITY, DEPENDABILITY, ECONOMY



Electro-mechanical Features

- Instantaneous, positive make and break action
- High contact pressure
- Non-sensitive to vibration and shock
- Stable under momentary high overload
- Available 5 P S T normally open or closed, or S P D T (Model 755 is DPDT or DPST normally open and normally closed)

Rating:
15 amp-125 v, ac
10 amp-250 v, ac
½ h.p.-125/250 v, ac
Listed by Underwriter's Laboratories

Write for SNAPAC Bulletin SL-3

CONTROLS COMPANY OF AMERICA
9577 Soreng Avenue • Schiller Park, Illinois
SORENG DIVISION

For more details circle NED-375 C7 on enclosed inquiry slip

NEW!

BLAW-KNOX GRATING AND TREAD CATALOG

This brand-new, comprehensive catalog presents more useful application information than ever before. Complete descriptive information such as spacings, weights, panel widths and bearing bar surfaces are included for each type of grating.

In addition, a wealth of useful data such as tables of safe loads, fastening methods, and model specifications are included.

If grating application and installation is part of your responsibility, you should have a copy of this useful publication. Send for your copy today. No obligation, of course.

BLAW-KNOX COMPANY
Blaw-Knox Equipment Division
1105 Blaw-Knox Bldg., 300 Sixth Ave., Pittsburgh 22, Pa.

GRATING APPLICATIONS: floors • platforms • walkways • catwalks • stair treads • fan guards • shelving • and many other uses, both outdoors and indoors, for versatile steel grating

Blaw-Knox Equipment Division
1105 Blaw-Knox Building • 300 Sixth Avenue
Pittsburgh 22, Pennsylvania

Gentlemen:
Please send me a copy of New Blaw-Knox Grating Catalog 2527.

Name Title
Company
Address
City Zone State

For more details circle NED-376 C7 on enclosed inquiry slip

KESTER SOLDERING FLUXES can be had in 160 different formulae, all widely proved by actual industrial use. Whatever your needs, we can supply a Flux that will give the exact results required. Kester Fluxes are available in the usual containers from 5 gallons to a pint.

Write today for Complete Flux Brochure

KESTER SOLDER COMPANY

4249 Wrightwood Avenue, Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

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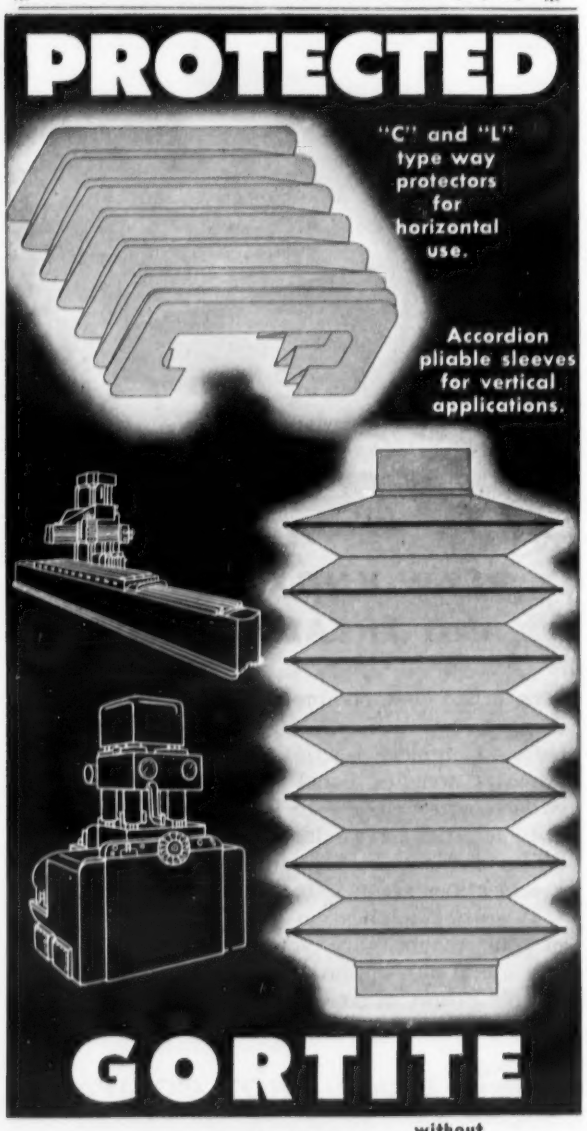
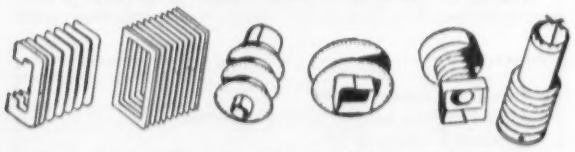


1 or 1000 without mold charge !

ALL SHAPES AND CONTOURS



New shapes and contours, like these shown here, are described in a new bulletin SPC-2. Zippers and special coatings extend the range of usefulness to thousands of industrial applications. Fabricated from neoprene-base materials GORTITE parts last from 3 to 5 times longer than molded rubber while overcoming the weakness of leather. Ask for AH-2N . . .

A&A Mfg. Company Inc.
2017 W. Clybourn St. • Milwaukee 3, Wis.

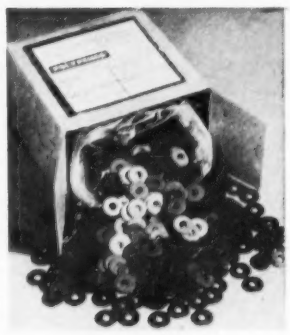
▲ For more details circle NED-378 C7 on enclosed inquiry slip ▲

MOTORIZED CONTROL
will actuate valves and dampers

Valves, dampers and similar devices can be driven and controlled with Au-Temp-Co reversing motor. Essentially a motor driven speed reducer, unit consists of oil immersed gear train and capacitor type power unit. It operates from standard three-wire single-pole double-throw temperature, pressure or humidity controls in ambients up to 125° F. Unit runs in either direction within its 90-degree travel limit as long as controller contact is made. When contact is broken, it will stop in any position, then reverses itself when contact is made in opposite direction. It operates on 24 v and is offered in six timings from 30 seconds to 6 minutes. Made by **Au-Temp-Co.**, Dept. NED, 657 Broadway, New York 12, N. Y.

▲ For more details circle NED-379 C7 on enclosed inquiry slip ▲

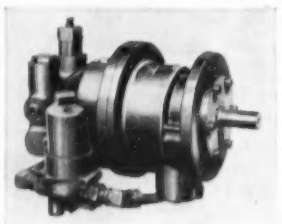
THRUST WASHERS
made of lubricant-filled nylon



Nylatron GS thrust washers are stamped from nylon strip and are available in 3/8 to 1 5/16-in. OD and 1/8 to 1-in. ID sizes. Thicknesses are 1/64, 1/32 and 1/16-in. Material is a molybdenum disulphide filled nylon formulation with better dimensional stability and lower deformation under load than standard nylon. Coefficient of friction is low. Use is in applications where good wear resistance is required under light thrust conditions. Made by **Polymer Corp. of Pennsylvania**, 2140 Fairmont Ave., Reading, Pa.

▲ For more details circle NED-380 C7 on enclosed inquiry slip ▲

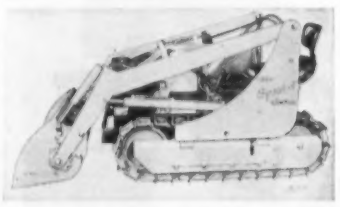
HYDRAULIC POWER PUMP
for 3000 to 5000 psi service



This constant displacement, heavy-duty pump will operate continuously at 3000 to 5000 psi in operations requiring 3 to 10 hp. Capacities at 3000 psi range from 233 to 1090 cu in. per minute, depending on size and speed of driving motor. Pump is suited for use on die casting machines, large injection molding presses, double-acting or four-way differential presses, or similar equipment involving high static loads over long periods under adverse conditions. Purolator-type micronic filter cleans hydraulic fluid before entrance to high pressure axial piston end. A complete range of mountings is available. Made by **Oilgear Co.**, 1561C W. Pierce St., Milwaukee 4, Wis.

▲ For more details circle NED-381 C7 on enclosed inquiry slip ▲

MIDGET TRACTOR-BULLDOZER
has 1300-lb draw bar pull



Because of its compact size, model R-9 Speedcat tractor and bulldozer can work in boxcars, small excavations and under existing buildings. Unit is 62 in. long and 36 in. wide without attachments, weighs only 1150 lb, yet has draw bar pull of 1300 lb. It features an in-line transmission with all gear trains and steering enclosed in one case. Three speeds forward and one reverse are multiplied by mechanical type "power steering" with dual range and neutral position. This allows speeds equal to most wheel tractors. Tractor is powered with 8-9 hp Briggs & Stratton 23FB engine and has single disk dry clutch and an external parking brake. Prices range from $1350 for the basic machine to $1795 for tractor and high lift attachments. Made by **Mead Specialties Co.**, Dept. SC-115, 4114 N. Knox Ave., Chicago 41, Ill.

▲ For more details circle NED-382 C7 on enclosed inquiry slip ▲

ALL-PURPOSE JONES HAND TACHOMETERS
for quick, easy, instantaneous readings over full 360 degrees of the dial

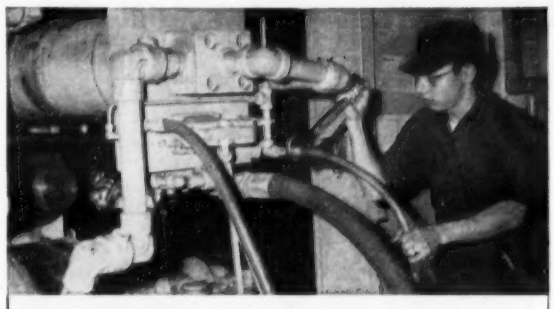
The Jones portable hand tachometer has many uses in industry. They are light, easy to carry and require no electrical connections. The scale readings are over the full 360° of the dial and are uniformly spaced for easy reading at a glance.

Does not require any special skill — Easy to use even by an unskilled person, the Jones portable hand tachometer features a range selector which is a small knurled knob plainly marked for easy and rapid range change.

Handy, accurate instrument for ready use and trouble shooting—Operators, trouble shooters and inspectors find the Jones portable hand tachometer a great assist as they do their work in automotive service stations, power plants, electric generating stations, oil refineries and many other places where a handy, accurate instrument is desirable. **Write for Bulletin 146-1 or demonstration to:**

JONES MOTROLA CORPORATION
STAMFORD, CONNECTICUT

▲ For more details circle NED-383 C7 on enclosed inquiry slip ▲



"We Use Aeroquip Flexible Hose Lines to Minimize Downtime"

Says Maintenance Superintendent, THE HOOVER COMPANY

Maintenance personnel at Hoover find a two-fold advantage in using Aeroquip Flexible Hose Lines: (1) For quick replacement of all fluid lines, hose lines can be made as they are needed from a small supply of Aeroquip Bulk Hose and Reusable Fittings; (2) Use of Aeroquip Flexible Hose Lines and Self-Sealing Couplings, which connect and disconnect with no loss of fluid, allow some machines to use larger dies and also speed interchange of attachments and complete machines. Production versatility has been increased in this way.

The Aeroquip Distributor listed in your Yellow Page Directory can pass many cost-cutting ideas on to you. Call him today.

Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN

IN CANADA: AEROQUIP (CANADA) LTD., TORONTO 10, ONTARIO
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A., CANADA AND ABROAD

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Solves the problem of lifting loads where weight is unevenly distributed. Crane operator slides saddle along cables to correct off-center spot. When hoisted, cables lock in V-grooves, *hold* unequal legs for level lift. *Wide* range of settings. *Many* applications. Sizes 3/4-ton to 50-ton. *Representative inquiries invited.*

THE CALDWELL COMPANY, INC., 1123 FOURTH AVE., ROCKFORD, ILL.

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Safer lubrication
One hand operation

NEW ARO-PAK

Refilling with time-saving Aro-Fil Gun Filler.

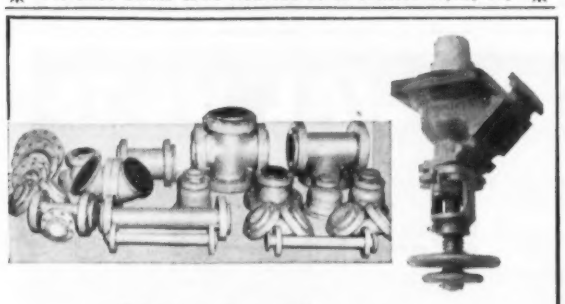
- **LIGHT WEIGHT, PORTABLE, ONE HAND OPERATION**... gets hard-to-reach fittings!
- **HOLDS 5 LBS. GREASE**... lubricates more fittings between refills.
- **PERMANENT AIR PRIME** . . . maximum pressure 7,500 p.s.i.
- **FASTER LUBRICATION, VOLUME DELIVERY** ... Cleaner lubrication. Sealed against dirt.
- **FAST REFILL**... in less than minute with ARO-FIL gun filler.

See your industrial distributor or write for Bulletin No. 5710.

THE ARO EQUIPMENT CORPORATION
Bryan and Cleveland, Ohio
Aro of California, 3141 S. Grand Avenue, Los Angeles 7 . . . Aro Equipment of Canada, Ltd., Toronto 15, Ontario.
Offices in All Principal Cities

ARO® LUBE EQUIPMENT
Also . . . Air Tools . . . Air Hoists . . . Aircraft Products . . . Grease Fittings

For more details circle NED-386 C7 on enclosed inquiry slip



Glassed steel pipe-fittings-valves

help you fight corrosion with safety

Corrosive solvents or fumes in your plant processes attack any equipment. But you can do a lot to minimize this.

Pipe, fittings and valves, lined with Pfaudler acid-alkali-resistant glass, combine excellent corrosion resistance with strength (125 psi).

And you can be sure that *such* pipe, fittings and valves won't contaminate your product and that they are easy to clean.

To find out how you can get this protection, ask for Bulletin 886.

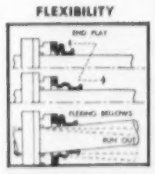
THE PFAUDLER CO.
Rochester 3, N.Y.
Specialists in Corrosioneering

For more details circle NED-387 C7 on enclosed inquiry slip

Shaft Seal Design With A Purpose!

POSITIVE DRIVE

FLEXIBILITY



PRECISION MATED LAPPED FACES

POSITIVE DRIVE provides long seal life. Driving band and washer driving notch absorb breakout and running torque. Damaging stresses on flexible sealing member are eliminated. Shaft and sleeve are protected against galling.

FLEXIBILITY eliminates axial and radial misalignment. Self-adjusting sealing head compensates for end play or run out. Maximum spring pressure is required for axial shaft movement . . . minimum spring pressure is maintained during radial shaft movement

PRECISION MANUFACTURE assures leakproof performance. Washer and seat surfaces are lapped to a perfect mate.

A SEAL FOR EVERY SERVICE . . . from water to destructive acids, corrosives and gases . . . temperatures to 1000°F. . . . pressures to 1200 psi . . . types and sizes to fit practically any mechanical or dimensional condition.

Request Bulletin S-204-2

CRANE PACKING COMPANY
6411 Oakton St., Morton Grove, Illinois (Chicago Suburb)
In Canada: Crane Packing Co., Ltd., Hamilton, Ontario

For more details circle NED-388 C7 on enclosed inquiry slip

DIFFERENTIAL PRESSURE PICKUP models sense ½ to 1000-psi fluid line pressure changes

This differential pickup is applicable where differential measuring or pressure control is required in line systems carrying corrosive or conductive fluids. Rocket engines, gas turbines and chemical processing systems are typical. Pressure differences are transmitted from single diaphragm through mechanical linkage to an unbonded strain-gage element isolated from pressurized fluid. Only Teflon and 18-18 stainless steel parts come in contact with fluid.

Models are offered for sensing differentials from ±½ to 1000 psi at line pressures up to 2000 psi. Output signal from 2000-psi line pressure is less than 1 per cent of full-scale output. Resolution is better than one part in 2500. Standard units operate with either alternating or direct current excitation at 6, 12 or 15 v, with bridge resistances at 350, 600 or 800 ohms and minimum full-scale outputs of 20, 40 or 50 mv, respectively. Temperature range is −65 to 350° F. Made by **Dynamic Instrument Co.**, Dept. NED, 28 Carleton St., Cambridge 42, Mass.

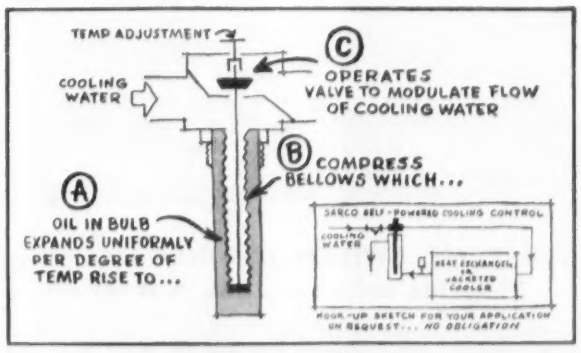
For more details circle NED-389 C7 on enclosed inquiry slip

THREADING MACHINES four models for pipe, rods, bolts have roller bearing spindles

Rapiduction Jr. line of threading machines includes four models of the same basic design with different die heads and workholders. Model 792 has ⅛ to 2-in. pipe and ¼ to 2-in. bolt and rod threading capacities. Two die heads offered use hobbed radial and tangential dies. Power-Matic gripping chuck is standard. Model 792-R with manually operated revolving radial type die head and open type vise is for threading after bending.

Model 791-A and 792-A bolt and rod threaders have automatic opening and resetting die heads. Former has ¼ to 1½-in. bolt range and ⅛ to 1¼-in. pipe or nipple range, while latter has ¼ to 2-in. bolt range and ⅛ to 2-in. pipe and nipple range. All four models have Timken roller bearing equipped spindles, 3-hp drive motors with four -speed transmissions and coolant pump. Made by **Oster Mfg. Co.**, Box 4326, Cleveland 32, O.

For more details circle NED-390 C7 on enclosed inquiry slip



You can stop

OVERCOOLING WASTE

Manual control of cooling water is so uncertain it's sure to result in OVERCOOLING (waste of water), UNDERCOOLING (damage to product or equipment).

It pays to assure optimum *safe* temperature by using Sarco Cooling Controls:—

1. Save water and replace guesswork with certainty.
2. Trouble-free design as simple as A-B-C!
3. Self-powered...no electricity or compressed air needed.
4. Self-contained...no exposed mechanism.
5. Packless...no stuffing gland to wear or jam the valve stem.
6. Thousands provide dependable service for firms such as Ingersoll-Rand, Butler Mfg. Co., Swift & Co.

¾" size—only about $39!

Write for bulletin 710 to Sarco Company, Inc., Empire State Bldg., New York 1, N.Y.

SARCO

For more details circle NED-391 C7 on enclosed inquiry slip

Quickdraft... the world's most efficient power exhauster

N-400-QD

...for industry

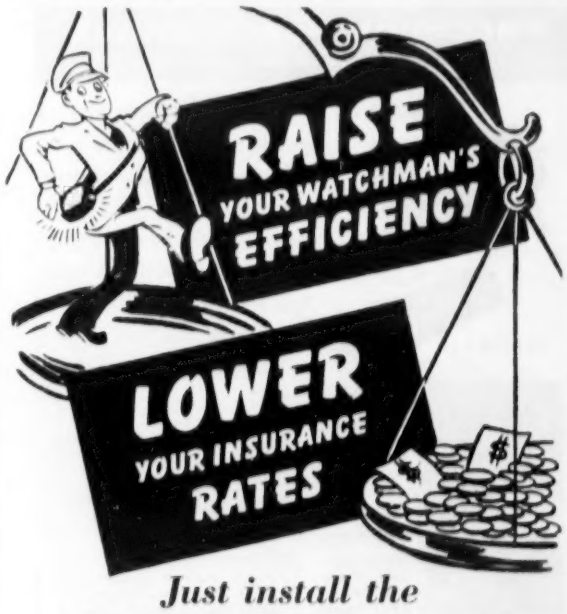
★ NO MOTORS, FANS OR BEARINGS IN EXHAUST LINE
★ NEEDS NO STACK
★ ACID RESISTING VITREOUS ENAMEL FINISH

Quickdraft improves industrial exhausting and cuts maintenance costs. Its blower operates in clean or outside air . . . eliminating down-time for cleaning and replacing fan blades. Quickdraft excels in venting paint booths . . . lightweight and abrasive waste . . . cellophane cuttings . . . chemical fumes . . . corrosive gases . . . noxious fumes . . . high temperatures . . . moisture and smoke. For heating units, it maintains constant draft required for efficient and economical combustion of all fuels. *Send for engineering data . . . today.*

Quickdraft COMPANY
P. O. Box 87-L, Dueber-Hampden Bldg., Canton, O.

Capacities of 56 standard and heavy duty models from 6 to 30 inches diameter . . . 8,400 CFH to 1,005,960 CFH. Greater capacities on request.

For more details circle NED-392 C7 on enclosed inquiry slip



Just install the

CHICAGO WATCHCLOCK System

- *Tamperproof*
- *Positive*
- *Easy to Install*
- *Low Priced*

Protection
Against FIRE · THEFT · SABOTAGE

The CHICAGO Watchclock System enables the watchman to prove that he's made his appointed rounds. The daily-dial records earn users of the CHICAGO Watchclock system reduced insurance rates. (Quickly pays for itself) . . . Used all over the world . . . APPROVED by the Underwriters' Laboratories and by the Factory Mutuals Laboratories.

Write today for Illustrated Folder and Prices

The first—and still the first

CHICAGO WATCHCLOCK
DIV. GREAT LAKES INDUSTRIES, INC.
1522 South Wabash Avenue, Chicago 5, Illinois
Offices in Principal Cities

For more details circle NED-393 C7 on enclosed inquiry slip

BAD NEWS FOR BURGLARS!

By saturating the protected area with high-frequency sound waves, Kidde's Ultrasonic Burglar Alarm System gives *complete* wall-to-wall, floor-to-ceiling protection. Properly installed, the portable, tamper-proof Kidde system qualifies for an Underwriters' Laboratories number 2 certification. Write today for Kidde's Ultrasonic Alarm Booklet, on the *best* burglar protection at the *lowest* cost!

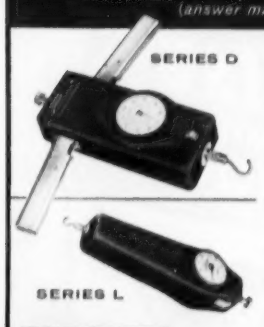
The words 'Kidde', 'Lux', 'Lux-O-Matic', 'Fyre Freez' and the Kidde seal are trademarks of Walter Kidde & Company, Inc. and its associated companies.

Kidde

ULTRASONIC DIVISION
Walter Kidde & Company, Inc.
324 Main St, Belleville 9, N. J.

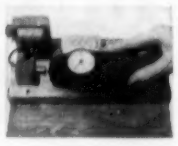
For more details circle NED-394 C7 on enclosed inquiry slip

PRECISION FORCE GAGES
(answer many test standard requirements)



Hunter Mechanical Force Gages are precision-built, direct reading instruments for measuring forces in tension and compression. Are accurate to within 1% of full-scale. "Hold-at-maximum" indicator available as optional feature. Types and sizes available for measuring forces ranging from 0-500 grams to 0-200 pounds.

Standard part of military aircraft kit, Force Gage is a tool for adjustment of controls.



Force Gage is fixture held to test precise electrical assemblies.

Plastics manufacturers use Force Gage to test bond strength of foil coatings on laminates

Thousands of force gages now used for inspection, testing, quality control in labs, on production lines, in the field.

WRITE FOR BULLETIN 750C

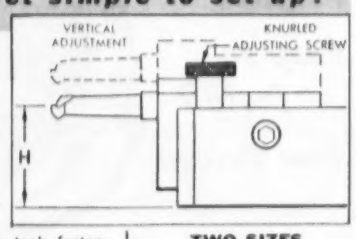
HUNTER SPRING COMPANY
14 Spring Avenue, Lansdale, Pennsylvania

For more details circle NED-395 C7 on enclosed inquiry slip

Accurate—yet simple to set up!

TOOL HOLDERS

for Bokum Boring and Threading Tools



Lathe operators can set up tools faster and more accurately with Bokum tool holders. Adjustment is simple; the only movement—straight up and down—is controlled by a knurled Acme screw. Tool is positively locked in place.

TWO SIZES

BT-0 SHANK, size ⅝" x 1" "H" adjustable from ⅝" to 1"

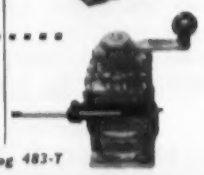
BT-1 SHANK, size ½" x 1¼" "H" adjustable from 11/16" to 1 9/16"

For Engine Lathes..

Tool or bit is held under an angle of 30° with the axis of the shank in order to bypass the tool post of the lathe.

For Turret Lathes.....

Tool is held parallel to the axis of the shank. Holders, for both engine and turret lathes, available for ⅜" and ½" square tool bits.



Write for catalog 483-T

BOKUM TOOL CO. INC. 14775 Wildemere Ave. Detroit 38, Mich.

For more details circle NED-396 C7 on enclosed inquiry slip

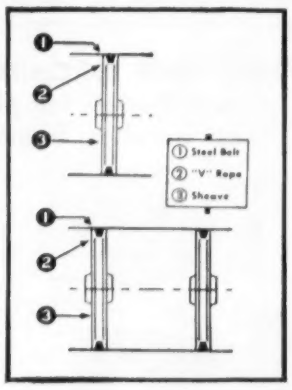
FOLDING TABLES & BENCHES
fold into 6½-in. deep cabinets

Durable, colorful plastic tops and benches in any of five decorator colors or two-tone combinations can be specified for line of Erickson Fold-A-Way tables and benches. Concealed in recessed cabinets or finished flush-mounted cabinets of 6½-in. depth, the tables and benches unfold or detach with a latch from the cabinet. Automatic hydraulic action unfolds the unit by itself once unlatched. Made by **Haldeman-Homme Mfg. Co.,** Dept. NED-3, 2580 University Ave., St. Paul 14, Minn.

For more details circle NED-397 C7 on enclosed inquiry slip

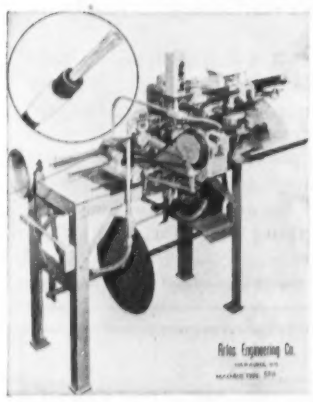
STEEL BELT CONVEYOR
maintains perfect belt alignment

Perfect belt alignment is maintained by the Tru-Track steel belt conveyor which comprises V-ropes bonded lengthwise to underside of standard Sandvik steel belt. These V-ropes travel over sheaves which provide positive tracking control. One or two V-ropes can be used, depending upon width of conveyor. Belt can be operated on inclines, or tipped sideways. It adapts readily to portable equipment and can run close to side skirts or work tables. Made by **Sandvik Steel, Inc.,** Sandvik Steel Belt Conveyor Div., Dept. N, 1702 Nevins Rd., Fair Lawn, N. J.



For more details circle NED-398 C7 on enclosed inquiry slip

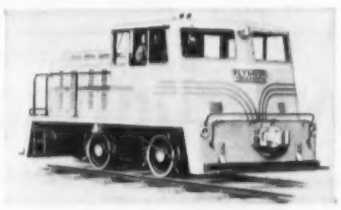
WIRE LEAD MARKER
cuts and strips lead, attaches tag



Three thousand wire leads can be measured, cut, stripped and given an aluminum identifying tag in 1 hour by the SPA wire lead marking machine. It is adjustable for cutting 4 to 194-in. lengths. Each tag is marked and cut from a continuous roll of blank aluminum material. Tags are automatically attached up to 15 in. apart anywhere along the length of wire at each feeding stroke. Interchangeable stamps for different markings can be used. Made by **Artos Engineering Co.,** 2751 S. 28th St., Milwaukee 46, Wis.

For more details circle NED-399 C7 on enclosed inquiry slip

INDUSTRIAL SWITCH ENGINES
25-40 ton units have cab in front



Cab-in-front design distinguishes the Torqomotive line of medium duty switching locomotives offered in the 25 to 40-ton weight range with either four or six-wheel drive. Cab affords operator almost unobstructed vision in all directions, including down to front coupler. Air tanks and other equipment are enclosed within cab, yet are fully accessible. Switcher employs a hydraulic torque-converter coupled to a Plymouth Locomotive Works transmission. Power transmission to wheels is smooth and without excessive wheel slippage. Choice of diesel engines is offered along with optional equipment to suit need of particular jobs. Made by **Fate-Root-Heath Co.,** Dept. D-6, Plymouth, O.

For more details circle NED-400 C7 on enclosed inquiry slip

NOW Flame hardened bed ways ... STANDARD EQUIPMENT at NO EXTRA COST!

ON ALL MODELS OF **CLAUSING** 12" LATHES

With the introduction of flame hardened bed ways as standard equipment at *no extra cost*, another important exclusive feature has been added to the long list of *Plus Values* that make the Clausing 12" Lathes outstanding in their price field. Write for illustrated literature, and also literature on the new variable speed drive and 12" Hydraulic Tracer Lathe.

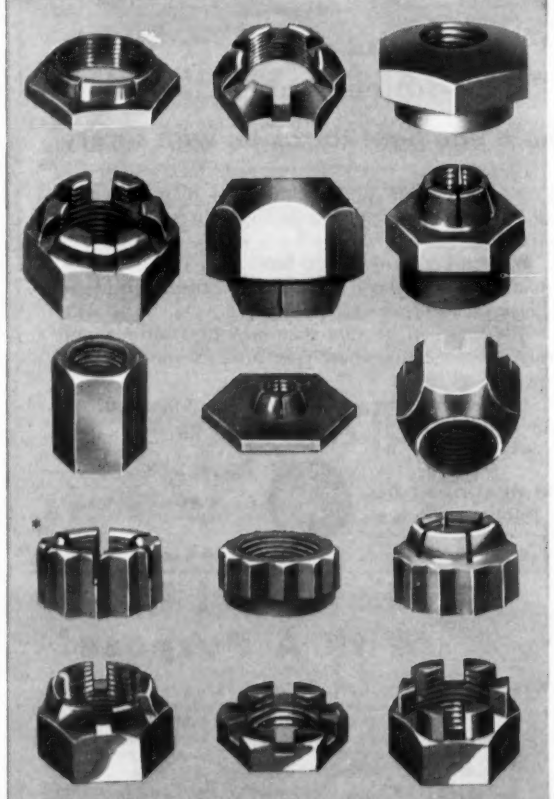
CLAUSING DIVISION ATLAS PRESS COMPANY
3-113 N. Pitcher St., Kalamazoo, Mich.

For more details circle NED-401 C7 on enclosed inquiry slip

SPECIAL NUTS

to specs. 7/16" - 4-1/4" cross flats

special machines + large stock of material × years of experience = speedy deliveries high quality low prices



Here are a few samples made to customers specifications . . Our batteries of special high-speed multi-spindle, automatic machines make possible fast and accurate production of hexagon nuts of non-standard height and special shape from carbon or alloy steel, Naval bronze or other non-ferrous metals; also AN 310 through AN 335 as per latest Airforce specifications. Very often the special nut you require may be similar to one we are already making and a simple modification would result in a price advantage and quicker deliveries to you . . Send us your blueprint and particulars —let us quote on your requirements . . We also have a catalog that contains complete specifications, engineering data and prices regarding our standard nuts.

*Also 12 Pointer brochure, on request.

NATIONAL MACHINE PRODUCTS COMPANY

*Manufacturer of Standard and Special *12 Pointer and Hexagon Nuts . . . "Huglock" and "Marsden" lockNuts.*

44231 Utica Rd., UTICA, Michigan

For more details circle NED-402 C7 on enclosed inquiry slip

BARCO Type C Rotary Joint

FOR STEAM, WATER, OIL, AIR OR GAS

For countless applications, Barco's new Type C Rotary Joint will give you the best operating records you've ever had.

FOR ALL SERVICES—One basic style for single flow or syphon flow . . . one basic seal for steam, air, water, oil, gas—*or alternating hot and cold!* For temperatures to 450°F. Special to 500°F.

NO LUBRICATION NEEDED—Bearings and seal self-lubricating. Seal self-adjusting for wear.

LOW TORQUE—Low starting and running torque. Saves power. Suitable for any ordinary speed. To 200 psi, steam, or 400 psi, hydraulic.

COMPACT, SIMPLE—Malleable iron body; heat treated steel shaft; R.H. or L.H. thread. Eight sizes, ½" to 3". **SEND FOR NEW CATALOG 310 TODAY. BARCO MANUFACTURING CO., 530-D Hough Street, Barrington, Illinois.**

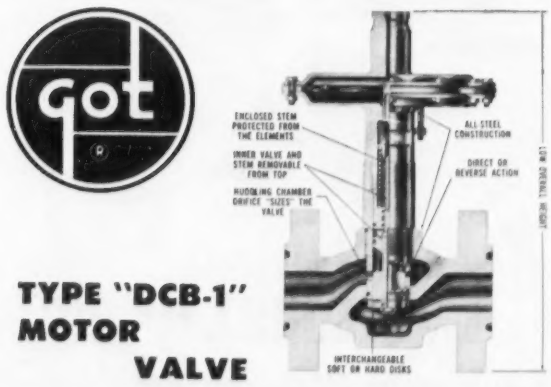
▲ For more details circle **NED-403 C7** on enclosed inquiry slip ▲

FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from ⅛ pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Central St., Somerville 45, Mass.*

▲ For more details circle **NED-404 C7** on enclosed inquiry slip ▲



TYPE "DCB-1" MOTOR VALVE

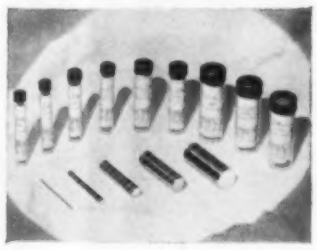
Check this valve closely if you need automatic control of high pressure liquid or gas. It features a pressure-balanced disk that permits pressures to 10,000 psi to be controlled with one diaphragm @ 40 psi supply air. Valve positioners are not required . . . bubble-tight closure is guaranteed.

Catalog No. 256 MVC contains complete information on this and many other GOT Motor Valves. Write for your copy today.

Garrett Oil Tools, Inc.
P. O. BOX 2427 • LONGVIEW, TEXAS
USI DIVISION OF U. S. INDUSTRIES, INC. New York, N. Y.

▲ For more details circle **NED-405 C7** on enclosed inquiry slip ▲

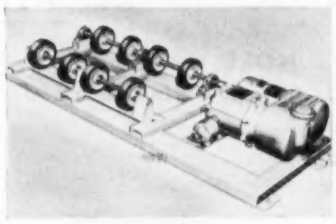
PLUG GAGES
reversible-pin type in 720 sizes



The 720 sizes offered in the De Luxe line of reversible-pin type plug gages serve 90 per cent of all plug gage needs. Made of Swedish - type oil-hardened tool steel, gages cover sizes from 0.030 to 0.750-in. in increments of 0.001-in., with tolerances of ±0.00005-in. Five handle sizes, as well as necessary collets, are available for use with gage members. Low cost gages can be purchased individually or in sets from **Dundick Tool Works, Inc.,** Dept. 33, 3410 W. 31st St., Chicago 23, Ill.

▲ For more details circle **NED-406 C7** on enclosed inquiry slip ▲

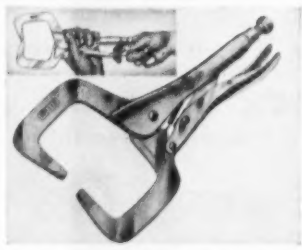
DRUM ROTATOR
for blending, tumbling and mixing



Loads from 500 to 1000 lb can be handled by the model 1-5154VS stationary drum rotator, a variable speed unit designed for blending, tumbling and mixing. Its prelubricated, sealed ½-hp motor with 6:1 gear reduction rotates 30 to 55-gal, 24-in. diameter drums at any speed from 7 to 40 rpm. Motor operates four 6-in. diameter neoprene drive wheels. Four 6-in. roller bearing idler wheels are also used. Idler plate is adjustable for various drum sizes. Made by **Morse Mfg. Co.,** 727 W. Manlius St., East Syracuse, N. Y.

▲ For more details circle **NED-407 C7** on enclosed inquiry slip ▲

LOCKING WRENCH & C-CLAMP
now have finger-pressure release



Vise - Grip wrenches and C-clamps which lock onto work with a strong grip actuated by hand squeezing now have an easy release operated by light thumb or finger pressure. Release bar, located just inside the lever, is simply pressed to spring jaws open, even when locked onto work with 2000-lb pressure. Photo shows the C-clamp used in aircraft, industrial and automotive fields. Welding clamps and sheet metal tools, both having double-lever action lock, are also offered with the new release. Made by **Petersen Mfg. Co.,** Dept. NE-1, DeWitt, Nebr.

▲ For more details circle **NED-408 C7** on enclosed inquiry slip ▲

TURN-TOWLS are tough on towel waste!

IT WILL pay you to look at these facts — a manufacturer, with 1,200 employees, used a towel service which cost $7.74 per 1,000 direct labor hours. Turn-Towls provided service for $5.59 per 1,000 direct labor hours.

Result — cost reduction of 28%

Write for name of nearest distributor

BAY WEST PAPER CO.
1130 West Mason St. • Green Bay, Wis.
A Division of Mosinee Paper Mills

▲ For more details circle **NED-409 C7** on enclosed inquiry slip ▲

▲ For more details circle **NED-410 C7** on enclosed inquiry slip ▲

PACKS TWICE The POWER* OF ORDINARY WALKIES

***12 volts for normal operation - - 24 volts for extra power!**

NEW RAYMOND Walkie

BY USING four 6-volt auto batteries (rather than a single 12-volt industrial battery) the Raymond Walkie gives you dual voltage . . . 12 volts for all normal operations, plus a surge of 24 volts for long hauls and for negotiating steep ramps with full capacity loads.

This totally new Walkie offers you other distinct advantages too. For example, 3 separate speeds, forward and reverse . . . an exclusive safety control to protect the operator in tight spots . . . convenient, handle-located operating controls . . . greater maneuverability for working in narrow aisles . . . lighter overall weight without sacrificing capacity or durability.

Clip & Mail!

The RAYMOND CORPORATION
4122 Madison St., Greene, N.Y.

Rush me full details on your new RAYMOND Walkie.
☐ Send Bulletin. ☐ Have representative call.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle **NED-411 C7** on enclosed inquiry slip ▲

YALE ELECTRIC TRUCKS

For smooth handling – Exclusive Magnetic Cam-O-Tactor controls acceleration, assures joltless starts, shock-free travel.

For safe driving – Lowered cowl and "open-vision" uprights provide extra forward visibility.

For smooth, fast lifting – Side-thrust rollers reduce stress, compensate for off-center loading. New roller channel construction reduces friction in lifting and lowering.

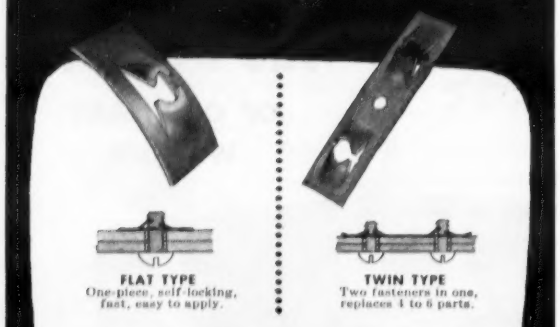
Capacities: 1,000 to 150,000 lbs. For full facts, write The Yale & Towne Mfg. Co., Philadelphia 15, Pa., Dept. A-373B.

YALE* INDUSTRIAL LIFT TRUCKS AND HOISTS

*REG. U. S. PAT. OFF.

For more details circle NED-412 C7 on enclosed inquiry slip

SAVE IMPORTANT ASSEMBLY DOLLARS with Tinnerman Speed Nuts®

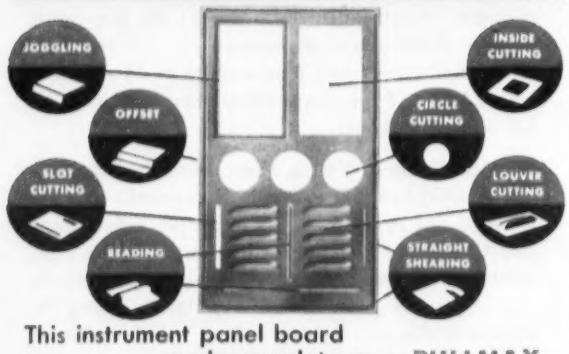


Any product can be assembled faster, easier, better with Tinnerman SPEED NUT brand fasteners. Here's why. SPEED NUTS are one-piece, self-locking spring steel fasteners. They eliminate lock washers, spanner washers, reduce parts handling and provide lightning-fast, vibration-proof attachments. Over 8,000 different shapes and sizes are available to help you cut assembly costs. Write for free descriptive literature.

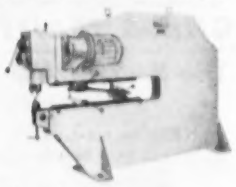
TINNERMAN PRODUCTS, INC.
BOX 6688, DEPT. 12, CLEVELAND 1, OHIO

For more details circle NED-413 C7 on enclosed inquiry slip

PULLMAX METALWORKING IDEAS



This instrument panel board made complete on a PULLMAX



One machine does straight shearing, inside or outside circle cutting, design cutting, inside square cutting, beading, joggling, slot cutting, louver cutting, dishing, edge bending and flanging. Seven sizes of machines cut up to 11/32" in mild steel. Ask for a demonstration.

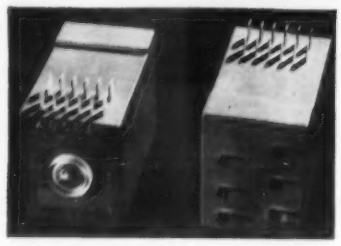
Write for the Pullmax Catalog on Money-Saving Metalworking Ideas.

See us at the 5th Annual All-Welding Show, Convention Hall, Philadelphia, Pa., April 9-12. Booth 500.

AMERICAN PULLMAX COMPANY INC.
2457 North Sheffield Avenue • Chicago 41, Illinois

For more details circle NED-414 C7 on enclosed inquiry slip

STATIC SWITCHING UNIT
plug-in protective function type



Scope of static switching is broadened to include such protective functions as undervoltage protection and release, switch volts protection, overvoltage limit and fault indication by this encapsulated plug-in type static control unit. Protective functions are provided by three electrically isolated control windings, one of which is suitable for use in circuits up to 750 v dc, on a magnetic amplifier unit. Monitor light indicates its operation. Unit is eighth in line of individual elements for low power static switching systems. Others are two multipurpose units, transistor switch unit, "and" rectifier, "or" rectifier, capacitor time delay and magnetic time delay. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

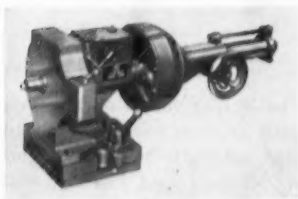
For more details circle NED-415 C7 on enclosed inquiry slip

SLOT, GROOVE & HOLE GAGES
check to 1/2-in. deep, 18-in. diameter

Accurate measurement of critical shallow slot, groove and hole dimensions is possible with Shalo-Chek adjustable indicator gages. They are only 1 13/16 in. high and can be used at the machine to check depths from 1/32 to 1/2-in. Three models check diameters from 1/2 to 6 in., 4 to 12 in. and 10 to 18 in. Use can be with No. 1 AGD standard dial indicators or with any air gage instrument by means of an adapter block and a contact air cartridge. Each includes case, pair of carbide contact gaging fingers, two wrenches, adapter block for OD checking and five sets of rest buttons for 1/32 to 9/32-in. depths. Made by **Ellstrom, Inc.**, 25739 Van Born Rd., Dearborn, Mich.

For more details circle NED-416 C7 on enclosed inquiry slip

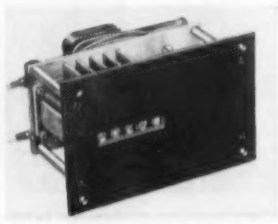
PRECISION BORER
is easily-mounted on any base



Tolerances of ±0.0003-in. and finishes to 30 micro-inches are achieved within the work range of the model C-4 precision Hydro-Borer. Unit can be mounted on any type base, and fixtures can be mounted directly on face, 90 degrees to the spindle. The 1¼-in. spindle has No. 2 Morse taper, supplied either concentric or eccentric. Latter taper allows increasing bore diameter total of 0.014-in. in increments of 0.001-in. without resetting tool bit. Oil-displacement feed is offered in either 0.002 to 0.004-in. or 0.0035 to 0.007-in. ranges. Unit will feed in either direction by reversing rotation and has adjustable stop in either direction. Made by **Greenlee Bros. & Co.**, 2241 Mason Ave., Rockford, Ill.

For more details circle NED-417 C7 on enclosed inquiry slip

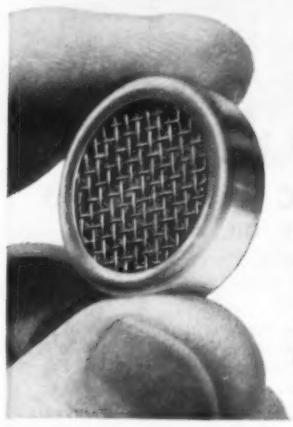
DATA READOUT COUNTERS
electrical or mechanical actuation



Multiple functions of direct indication, remote indication, recording and control are performed by series of electrical data readout counters. Electrically or mechanically actuated units have manual or electrical reset. They automatically create specific contact closures for each reading visually displayed, furnishing data for remote indication, remote printing or logging, and remote or direct card or tape punching. Serial or parallel transmission of data is accomplished by use of sequence scanners or direct connections. Transmission may be continuous or intermittent, with the counter providing data storage. Units are compatible with standard commercial equipment. Made by **Veeder-Root Inc.**, 19-P Sargeant St., Hartford 2, Conn.

For more details circle NED-418 C7 on enclosed inquiry slip

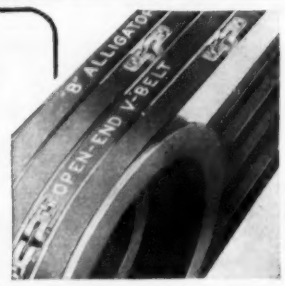
NEW FILTER DISC
screen disc cartridge for service as breather or flame arrester



• A new filter disc incorporating wire cloth screen as filter media is available for application to many types of products. Completely self-contained, for simple adaptation to any product design, the filter disc serves as a breather or can be used as a tank vent flame arrester. Filter media is multiple layers of fine mesh steel or bronze wire screen. Available in 1", 1⅜", 1⅝", 3½" diameters. Write for complete information. **AIR-MAZE CORPORATION**, Cleveland 28, Ohio.

For more details circle NED-419 C7 on enclosed inquiry slip

WHICH V-BELT is best for you?



If the correct size of endless V-Belt is not readily available, or if you have to tear down machinery to install, then the best belt to use is open-end V-Belting fastened with

ALLIGATOR **V-BELT FASTENERS**

★ In this way you can make up V-Belts in *any length* to fit *any drive* the fast economical way—V-Belts that perform exceptionally well.

★ In contrast to link-type belts these ALLIGATOR fastened V-Belts have just *one* strong joint . . . *stretch and follow-up maintenance are reduced to a minimum.*

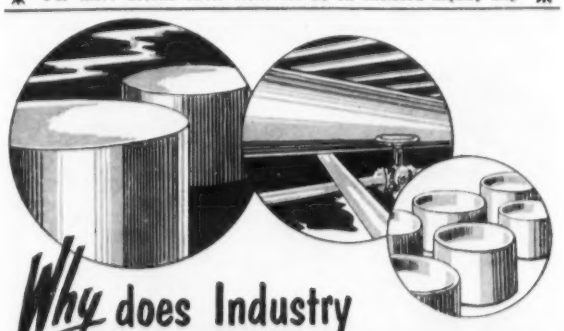
ALLIGATOR INTRODUCTORY V-BELT DRIVE UNITS

contain V-Belting, Fasteners and Tools —everything you need in one compact package to make up V-Belts quickly. Available in sizes A, B, C & D.

Ask for Bulletins V-215 and V-216
Order From Your Distributor

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Illinois

For more details circle NED-420 C7 on enclosed inquiry slip



Why does Industry buy ALCONOX for ALL Equipment Cleaning Problems?

• Simply because for glass piping systems, tanks, metalware, ball bearing assemblies, kettles and all general industrial equipment Alconox has proven itself time and again the most versatile, safe, efficient multiple cleaning detergent on the market.

If that isn't enough, Alconox will do all of this at a cost of less than 2 cents per gallon.

Literature, samples and the name of your nearest distributor on request.

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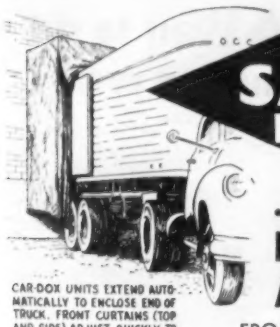
WETTING AGENTS · DETERGENTS
853 Broadway New York 3, N. Y.

AVAILABLE IN

BOX of 3 lb.	$ 1.95
CARTON of 12 boxes of 3 lbs.	18.00
DRUM of 25 lbs. lb.	.45
DRUM of 50 lbs. lb.	.40
DRUM of 100 lbs. lb.	.40
DRUM of 300 lbs. lb.	.32

Slightly higher on Pacific Coast.

For more details circle NED-421 C7 on enclosed inquiry slip



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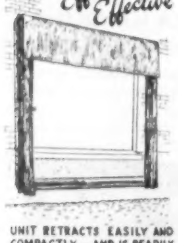
...PROTECT THEM FROM RAIN, SNOW AND ICE with

FROMMELT TRUCK OR RAIL

CAR-DOX

CAR-DOX UNITS EXTEND AUTOMATICALLY TO ENCLOSE END OF TRUCK. FRONT CURTAINS (TOP AND SIDE) ADJUST QUICKLY TO PROVIDE FULL PROTECTION.

Practical Efficient Effective



UNIT RETRACTS EASILY AND COMPACTLY — AND IS READILY SECURED CLOSE TO FRAME.

RETRACTABLE ALL-WEATHER DOCK PROTECTORS

CONSTRUCTED OF TOUGH, DURABLE FABRIC (HIGHLY RESISTANT TO WEAR, WATER, MILDEW AND FIRE) FITTED OVER HEAVY GAUGE STEEL RETRACTABLE FRAMES—CAN BE POSITIONED (EXTENDED OR RETRACTED) BY ONE MAN IN A MATTER OF MINUTES.

SPEEDS LOADING and UNLOADING in INCLEMENT WEATHER.
REDUCES ACCIDENT FACTORS.
PROTECTS MERCHANDISE from LOSS or DAMAGE by WEATHER.

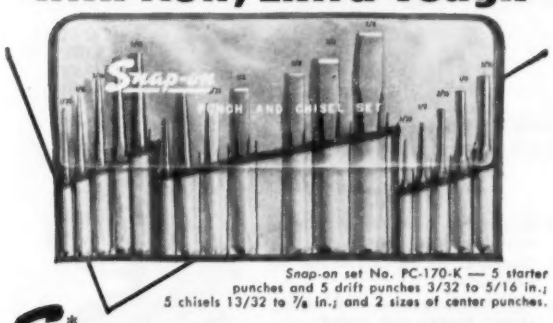
MEETS REQUIREMENTS OF U.S. DEPT. OF AGRICULTURE. UL APPROVED

For detailed information and prices WRITE FROMMELT Industries BOX 165 • DUBUQUE, IOWA

• FABRICATORS OF APPROVED SAFETY PRODUCTS •

▲ For more details circle NED-422 C7 on enclosed inquiry slip ▲

Cut Clean, Punch True with New, Extra-Tough



Snap-on set No. PC-170-K — 5 starter punches and 5 drift punches 3/32 to 5/16 in.; 5 chisels 13/32 to 7/8 in.; and 2 sizes of center punches.

*Snap-on CHISELS and PUNCHES

This new set gives mechanics the right chisel, starter punch or drift punch to fit the job, providing faster, more exact results, longer tool life:

Special steels are scientifically heat-treated for long life — have slow mushrooming striking surface.

70-degree chisel edge cuts better, stays sharp longer.

New Octo-Square shape gives users a better, more comfortable grip for firm control, greater safety and prevents tool from rolling out of reach.

New-style hold-tight kit bag folds easily, protects tools. Transparent flap keeps tools in place.

The *Snap-on* representative who calls on you can show you a complete range of *Snap-on* tool sets for production or maintenance work.

*Snap-on is the trademark of Snap-on Tools Corporation.

SNAP-ON TOOLS CORPORATION
8110-C 28th Avenue • Kenosha, Wisconsin

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free booklet tells the SICO story!

Here is the answer to your space and seating problems . . . the SICO System; a complete line of table-seating units. The Tip-Top table & bench (illustrated) features:

- Simple, safe, one-man operation
- Giant rubber casters for easy movement
- Structural tube frame, lustron plated
- Choice of 3 lengths and heights

SICO

Every SICO table is designed for long life, heavy-duty service, easy transport and storage, and maximum seating per dollar.

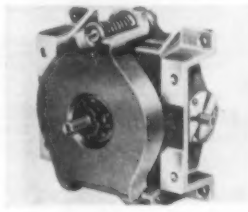
Choose from a complete line; Sico folding table-bench units, folding tables, and stationary tables . . . all are built to rigid Sico specifications.

YOUR FREE BOOKLET—complete information on the entire Sico line. There's a Sico table waiting to work for you! Write:

SICO Manufacturing Company, Inc., Dept. 510
5215 Eden Avenue South • Minneapolis 24, Minnesota

▲ For more details circle NED-424 C7 on enclosed inquiry slip ▲

BALL & DISK INTEGRATORS for computing or control systems



Extremely accurate Beckman ball and disk integrators are used in computing systems requiring the mechanical solution of differential equations. Other uses include control or sensing element in servo systems, or as servo-system output in rate generators. Ball carriage has 2-in. travel and maximum output torque of 5 oz-in. Maximum disk input torque required at zero load is 3 oz-in., and recommended speed of integrator is 1000 rpm. Integrator disk is hardened to Rockwell C65 and lapped to super finish. Made by **Helipot Corp.**, Dept. NED, Newport Beach, Calif.

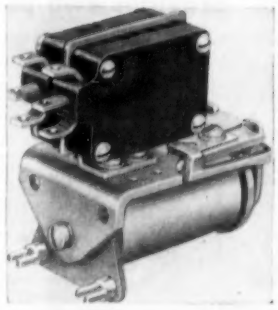
▲ For more details circle NED-425 C7 on enclosed inquiry slip ▲

PROXIMITY CONTROL uses standard electrical plug

Metal coming near a probe is used to control circuits, electrical machinery, batch counters and electromechanical counters when it actuates the model 4901-RAC proximity pickup control. Device incorporates three-pin AN type input connectors and an alternating current convenience receptacle which permits use of conventional plugs in controlling electrical devices by means of a metal-detecting pickup. Relay is a single-pole double-throw type with 5-amp, 115-v ac noninductive load contacts. Operation is at speeds up to 600 per minute. Made by **Electro Products Laboratories, Inc.**, 4504 N. Ravenswood Ave., Chicago 40, Ill.

▲ For more details circle NED-426 C7 on enclosed inquiry slip ▲

MINIATURE RELAY has enclosed snap-action contacts



Class 22SA open type miniature relay has a contact rating of 10 amp at 115 v ac, noninductive load. It can be furnished with one enclosed snap-action switch for single pole, double throw contacts, or with two switches for double pole, double throw contacts. Plug-in mounting type is also available. The 2 3/8 x 1 1/16 x 1 7/8 in. unit is offered for operation to 230 v dc or to 440 v 60 cycles ac. Made by **Magnecraft Electric Co.**, 3350K W. Grand Ave., Chicago 51, Ill.

▲ For more details circle NED-427 C7 on enclosed inquiry slip ▲

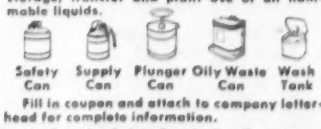
Quick SAFE Complete

Washing and Cleaning of Production Parts . . . with PROTECTOSEAL Air-Matic PARTS WASHER

Set beside machine or convenient to any other working area. Load wash basket as parts come from machine or in bulk. AIR-MATIC washes unattended while work continues.

Basket moves *through* solvent with minimum turbulence and evaporation. *Safe:* renewable fusible link closes cover automatically to smother fire.

Protectoseal designs and builds all types of approved fire preventive equipment for the storage, transfer and plant use of all flammable liquids.



Safety Can | Supply Can | Plunger Can | Oily Waste Can | Wash Tank

Fill in coupon and attach to company letterhead for complete information.

In Canada: Safety Supply Co., Toronto.

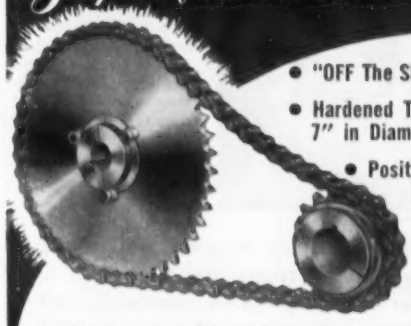
The Protectoseal Company, 1964 So. Western Avenue, Chicago 8, Illinois

☐ Send Air-Matic Parts Washer Catalog Sheet
☐ Flammable Equipment Guide Chart and Price List describing more than 30 approved Fire Prevention Devices for Plant Use

Name _____ Title _____
Company _____
Address _____
City _____ Zone _____ State _____

▲ For more details circle NED-428 C7 on enclosed inquiry slip ▲

Save MAINTENANCE TIME INVENTORY COSTS with CULLMAN Grip-Master SPROCKETS



- "OFF The Shelf" Service...
- Hardened Teeth up to 7" in Diameter...
- Positive Shaft Fits Without Reboring...
- Standard Keyway and Set-Screws

What's more, sprocket replacement costs are reduced about 30%. Hubs or bushings can be used over and over, with installation and removal fast, clean, and simple.

For complete information write for your Grip-Master Sprocket catalog. Or better still, contact your Cullman Distributor for information and service.

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25578 CULLMAN WHEEL COMPANY, 1333 ALTGELD ST., CHICAGO 14, ILLINOIS

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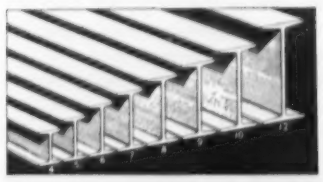
Modernize plant operations—reduce handling costs with R-W OVER WAY TRU TRED Conveying Equipment

Production efficiency is a *must* if you're going to meet today's competitive market situation and realize your deserved profits. R-W "TRU-TRED" Conveyors will help to raise your production efficiency by cutting down on handling time and releasing plant personnel for other jobs. R-W "TRU-TRED" OveR-Way conveyors are designed for heavy duty handling and electric hoist service with a minimum of installation superstructure. Why not let one of our Field-Engineers show you how R-W conveying equipment will solve your materials handling and production problems? Write today—there's no obligation and it may prove to be very profitable for you.



a size to meet your exact requirements

Whatever your problem, from the lightest loads up to heavy loads, for manual or high speed electric operations, "TRU-TRED" will meet your exact specifications. Illustration (above) of sizes available will give you a good idea of the varying range of conditions that can be successfully met with "TRU-TRED" track.

WRITE TODAY for complete information. Request Catalog A-64.

Richards-Wilcox MANUFACTURING COMPANY Materials Handling Division

435 W. THIRD STREET, AURORA, ILL. Branches in Principal Cities

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ERIEZ permanent-powered Plate Magnets

prevent fires, machinery damage, product contamination

The Eriez HI-POWR Plate Magnet shown here at the Tetley Tea plant daily traps about a pound of tramp iron (wire, bolts, nails, etc.) that could cause product contamination and machinery damage. Tetley enjoys a $5,000 annual saving from the magnet.

In 100 fields, Eriez Plate Magnets are proving their value by pulling tramp iron from lines of *all* kinds. Eriez Plate Magnets are non-electric, self contained, operate without any wires or attachments. Their magnetic strength is guaranteed forever; first cost is the *only* cost.

ERIEZ HI-POWR MAGNETIC SEPARATORS

Magnetic SEPARATION AUTOMATION VIBRATION Equipment

Couldn't your operations use an Eriez Plate Magnet?
For BIG NEW BULLETIN, write

ERIEZ Mfg. Co. 80-G Magnet Dr., Erie, Pa.

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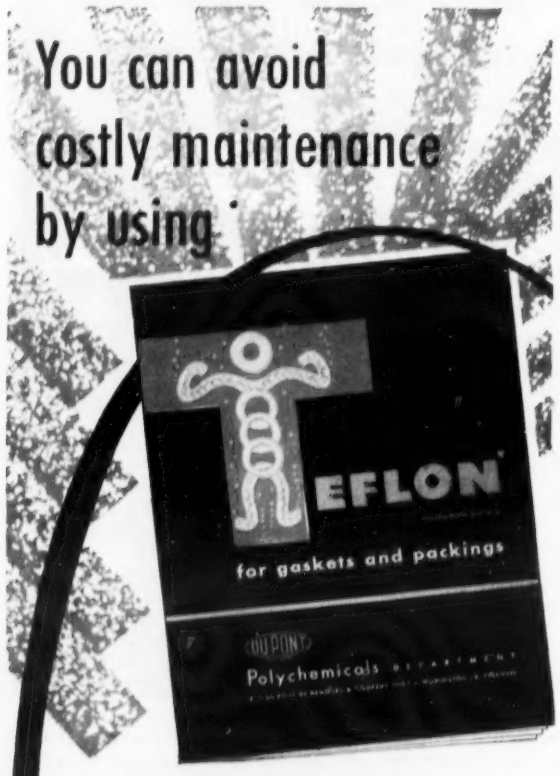
You can avoid costly maintenance by using



Send for your free copy

Flanges and shafts are often critical points in design. Many designers have found that the way to avoid trouble at these points is to use gaskets and packings of Du Pont TEFLON tetrafluoroethylene resin. TEFLON has outstanding resistance to chemicals and heat. It also has the mechanical properties to make it an outstanding material for sealing.

This 16-page booklet shows many types of sealing devices made better with TEFLON. It goes into the details of sealing problems and handles them in a clear, informative way. Mail the coupon for your copy.

DU PONT

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Better Things for Better Living . . . *through Chemistry*

E. I. du Pont de Nemours & Co. (Inc.), Polychemicals Dept., Room 543, Du Pont Building, Wilmington 98, Delaware
Please send me free booklet, TEFLON for gaskets and packings.
Name _____
Company _____ *Position* _____
Street _____
City _____ *State* _____
Type of business _____
In Canada: Du Pont Company of Canada (1956) Limited, P. O. Box 660, Montreal, Quebec

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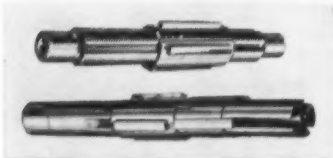
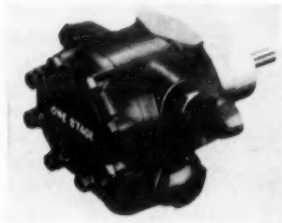
EXPANDING JAW MANDRELS
for use on various machine tools



Concentric within 0.0015-in., Erickson-Nicholson expanding jaw mandrels are used as internal chucks for gripping and driving bored parts during machining. On production runs with permissible wide variation of bore tolerances, one unit can replace a number of solid arbors, even on long work. Type A step-jaw mandrel, available in five sizes for ½ to 4-in. ID parts, accommodates hexagonal broached and round holes. Heavier type B unit with straight jaws is offered in 14 sizes for bores from ½ to 7 in. ID, and can be used in square or round holes. Made by **Erickson Tool Co.**, 2311 Hamilton Ave., Cleveland 14, O.

▲ For more details circle NED-433 C7 on enclosed inquiry slip ▲

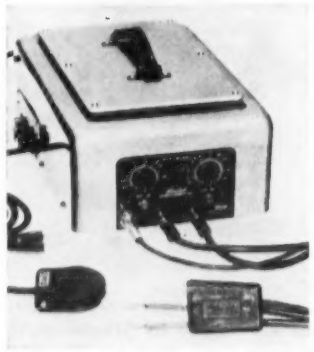
OIL PUMPS
develop pressures up to 300 psi



Lubricating, hydraulic and light fuel oils are delivered at pressures up to 300 psi and speeds to 1800 rpm by model OB pumps. Modified versions with special gearing for speeds up to 3600 rpm are available. Pumping capacity is 24, 30 or 39 gph in either right or left rotation versions. Lapped nitroloy seal, flexibly held against dry lubricated bronze bushing clamped to shaft prevents leakage along the shaft. Optional is a large 90 x 100 mesh integral strainer of Monel metal screen. Two inlet and two outlet ports permit connections on either side of body. Made by **Sundstrand Machine Tool Co.**, Sundstrand Hydraulic Div., 2210 Harrison Ave., Rockford, Ill.

▲ For more details circle NED-434 C7 on enclosed inquiry slip ▲

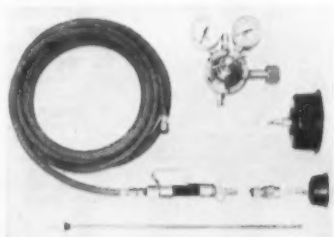
RESISTANCE WELDER
provides two preset welding heats



Adapted from a standard model for making welds in vacuum tube assemblies, the Weldmatic model 1026 MA dual heat welder provides either of two preset welding heats instantaneously by foot-switch operation. Two heat ranges provided cover 0.1 to 40 watt-seconds and from 0.1 to 80 watt-seconds. Separate controls for each range are continuously adjustable. Welder operates on capacitor-discharge principle, welding with a single short pulse of heavy current. Plug-in receptacles accommodate various types of electrode handpieces and fixtures. Unit is portable and maintenance-free. Made by **Unitek Corp.**, Weldmatic Div., Dept. NED, 275 N. Halstead Ave., Pasadena 8, Calif.

▲ For more details circle NED-435 C7 on enclosed inquiry slip ▲

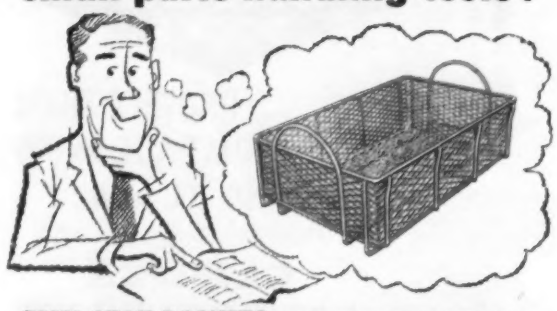
INJECTION KIT
for hardening foundry cores



Foundry cores and molds can be hardened in a few seconds with this injection kit used to blow carbon dioxide into core sand mixed with sodium silicate-bonded binder. The carbon dioxide reacts with the sodium silicate to form a gel that coats sand grains and hardens the cores. Kit consists of Torchweld two-stage carbon dioxide regulator, 15 ft of ¼-in. hose, hand-operated valve, quick-change couplings, two sizes of rubber plunger cups, steel injection tube and fittings. Carbon dioxide is added to sand by either of the two cups, or the injection tube, depending on size and shape of core. Rammed or blown cores are hardened in the same manner. Made by **National Cylinder Gas Co.**, 846 N. Michigan Ave., Chicago 11, Ill.

▲ For more details circle NED-436 C7 on enclosed inquiry slip ▲

Looking For A Way to cut small parts handling costs?



EEZY-STAK BASKETS **STOP EXTRA HANDLING, SPEED PARTS PROCESSING . . . REDUCE COSTS!**

Here's how one manufacturer solved costly, time-consuming, small parts handling. Using EEZY-STAK standard wire baskets, a complete series of parts transfer operations was eliminated. Result: Five production processes now performed in one basket—degreasing, drying, pickling, rinsing, cyaniding—plus storage, *without parts removal!*

EEZY-STAK baskets have the exclusive, patented *interlock* handle, for easy stacking and compact storage. Open mesh construction Full visibility . . . quick drainage . . . clean! From initial production to final assembly, EEZY-STAK baskets put small parts handling on an economical, low-cost basis. Cut Costs! Investigate the advantages of EEZY-STAK baskets for *your* plant!

Write today for Bulletin No. B-54 to Wire & Iron Products Inc., 1727 Sixteenth Street, Detroit 16, Michigan.

WIPCO

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BEVERLY *Pneumatic* THROATLESS SHEAR

CAPACITY 3/16 MILD STEEL 10 GA. STAINLESS

FASTER, EASIER CUTTING *to any Shape!*

- **Compactly built for maximum visibility and efficiency**
- **Operates on 35 to 150 PSI air pressure**
- **Adjustable power and return stroke length and speed**

Beverly Pneumatic Shears combine all the advantages of Beverly Throatless Shears with fast, effortless cutting action through air cylinder operation. Air operation speeds work, permits accurate cutting to a pattern or template, as operator can concentrate on guiding work through the shear. Flow control valves permit precise adjustment of stroke speed; adjustable actuating arm controls stroke length. Foot Switch permits operator to use both hands on the work piece. Operates on 110V. 60 cycles AC and 35 to 150 PSI air pressure.

See your nearby Beverly Distributor
Write for catalog sheet and complete details.

BEVERLY SHEAR MANUFACTURING CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

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DOLE controls can give you Automatic Operation

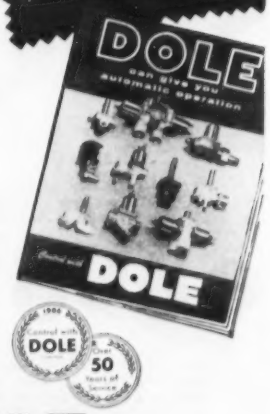
If you manufacture equipment where the control of temperature and flow is important, Dole Controls may offer you a simple, economical method of obtaining automatic operation.

Here are practical applications for the time-tested, high-quality Dole Automatic Controls on:

- Home Laundry Machines
- Home Dishwashers
- Drink Dispensers
- Ice Cube Makers
- Coffee Makers
- and many others

If you have any problem where automatic control is important, send for this book. Dole engineers will work with you on any specific problem.

Send for this New Book



Control with

DOLE

TRADE MARK

The DOLE Valve Company
1901 Carroll Avenue, Chicago 12, Illinois

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KNU-VISE clamps help cut drilling time

MODEL HS-400

Wherever fast, positive material holding is required—Knu-Vise toggle-action clamps are helping manufacturers do a better job.

One application is shown above. This time Knu-Vise clamps are in use on a special fixture developed by Northrop Aircraft engineers for simultaneous drilling of seven rocket pod orifice holes for the Northrop F-89 Scorpion. Drilling time has been reduced from 10 hours to 45 minutes—including set-up time.

REMEMBER—if you have a holding problem—Lapeer Mfg. Co. offers a wide range of hand, air and oil operated clamps to increase efficiency and lower costs. Our catalog contains complete information. Write for your copy today.

Manufacturers of over 150 models of manually and air-operated clamps and pliers

KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.

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WESTERN DIVISION 422 Magnolia, Glendale, California • CANADIAN DIVISION Higginson Engr., Hamilton, Ontario

▲ For more details circle NED-440 C7 on enclosed inquiry slip ▲

to answer your dust problems

new free handbook

details on how you can cut costs, up employee morale with flexible, economical unitized *dust collectors*

Here's a 28-page, fully illustrated manual of up-to-date dust control information. You'll find it loaded with useful facts, figures, charts, applications and other valuable information. Contains details on all the portable, self-contained Torit Dust Collectors—their use, flexibility and economy. Includes complete specifications on the broad range of Torit types and models.

Your copy FREE by writing:

TORIT MANUFACTURING COMPANY 311 Walnut Street St. Paul 2, Minnesota, Dept. 203

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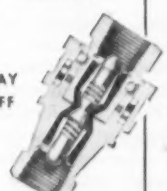
GREASE STEAM HYDRAULIC FLUIDS WATER GASOLINE L.P. GAS REFRIGERANTS COOLANTS OXYGEN AIR

WHAT'S *Your* COUPLING APPLICATION?

ACETYLENE OIL VACUUM

HANSEN QUICK-CONNECTIVE COUPLINGS

ONE-WAY SHUT-OFF



TWO-WAY SHUT-OFF

ALSO STRAIGHT-THROUGH COUPLINGS

SPECIFICALLY ENGINEERED ...NEVER MERELY ADAPTED ...FOR EACH PARTICULAR TYPE OF APPLICATION

WRITE FOR THE HANSEN CATALOG

● Here's an always ready reference when you want information on couplings in a hurry. Lists complete range of sizes and types of Hansen Quick-Connective Couplings. Write for your copy.

Representatives in Principal Cities

THE HANSEN MANUFACTURING COMPANY

4031 WEST 150th STREET • CLEVELAND 11, OHIO

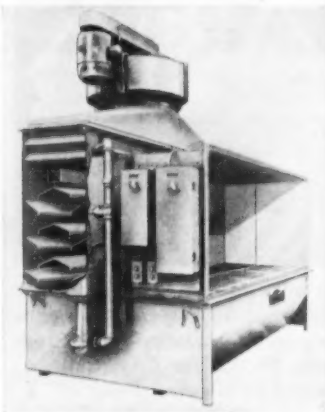
▲ For more details circle NED-442 C7 on enclosed inquiry slip ▲

POWER WOODWORKING TOOL is combination multipurpose unit

Circular undertable saw which can cut from 0 to 90 degrees is the basic unit of the Boose Power Workshop, comprised of two table top sections affixed to a tubular steel frame, operating controls and a ¾-hp motor. Quickly set up additional equipment includes jointer-shaper, disk-drum sander, electric hand saw, drill press, lathe, mortiser, router and band saw. Motor demounts for use with attachments or the 8-in. electric power hand saw. Saw blade is visible on all cuts and equipped with a key switch for locking when not in use. It will cut 1½-in. thick lumber. Made by **Reamstown Products Co.**, Dept. M1, Reamstown, Pa.

▲ For more details circle NED-443 C7 on enclosed inquiry slip ▲

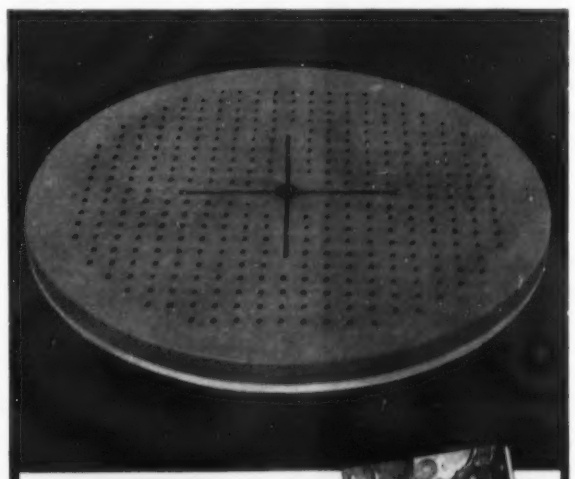
VENTILATED GRINDING BENCH wet-type removes fumes, dust and particles in grinding operations



This wet-type ventilated grinding bench will improve grinding operations by removing abrasive particles, fumes and dust. Bench is most practical in aluminum - magnesium grinding since it reduces the explosive hazard of these metallic dusts. The self - contained unit is made up of a tank for recirculating and sludge disposal, and includes a recirculating pump, exhaust fan, hardwood grating work surface and air-washing chamber.

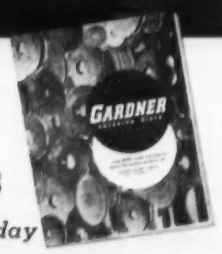
Top mounted exhaust fan draws air upward through water curtains within the washing chamber which contains six impingement shelves and a dual bank of moisture eliminators. Water or washing agent introduced at top flows downward against upward flow of contaminated air. Latter goes through a wash stage at each impingement shelf where the air and liquid counterflow has set up a violent swirling action. The eliminators, located above the impingement shelves, act to remove free moisture from air. Made by **Zack Co.**, Machinery & Equipment Div., 12600 Beech Rd., Detroit 39, Mich.

▲ For more details circle NED-444 C7 on enclosed inquiry slip ▲



new 20-page selector guide for abrasive discs

...send for your copy today



GARDNER abrasive discs MACHINE COMPANY 460 Gardner St. Beloit, Wisconsin

▲ For more details circle NED-445 C7 on enclosed inquiry slip ▲

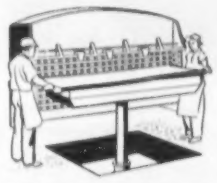
Lift it the low-cost way

WITH DEPENDABLE HYDRAULIC POWER

Load trucks from floor level no dock needed

Move traffic from one floor level to another

Rotary Levelator Lifts, using dependable, economical oil-hydraulic power, have countless applications in modern industry. Capacities to 100,000 lbs. Standard models and special lifts engineered to your specifications. Write for catalog.



Feed machines, perform other industrial lifting jobs

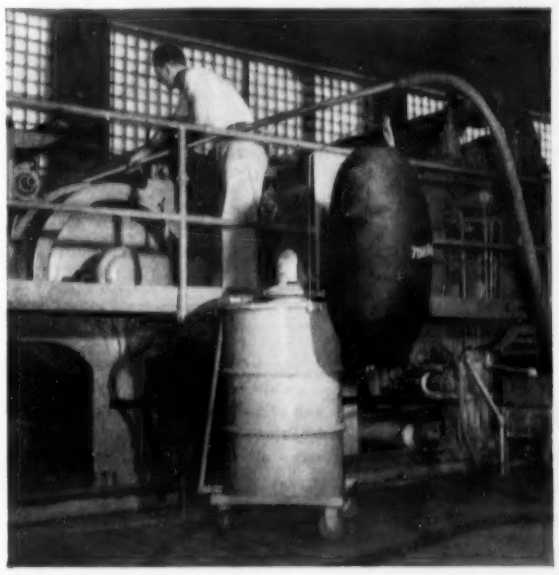
Rotary **Levelator® Lifts**

ROTARY LIFT COMPANY

Division of the Dover Corporation

1092 Kentucky, Memphis 2, Tenn. • Chatham, Ont.

▲ For more details circle NED-446 C7 on enclosed inquiry slip ▲



TORNADO

CUTS MAINTENANCE COSTS IN THE PAPER INDUSTRY TOO!

Industry after industry has found the Tornado Series 80 Vacuum Cleaner will save them maintenance time and money.

For example, in the photo above, Series 80 motor unit is used as a Jumbo Conversion unit to clean paper machine dryers. Using 48 feet of hose, this powerful (325 m.p.h.), and versatile unit makes short work of a tedious cleaning operation—helps maintain top quality paper, too!

Do you have a tough cleaning job? Or maybe you'd like to cut costs. Whatever it is, the Series 80 Vacuum Cleaner can solve your cleaning problems. Whether you're picking up dirt, water, oil or chips you'll do it better, faster with a Tornado Series 80. And it converts quickly to six different cleaners. Have an on-the-job demonstration today!

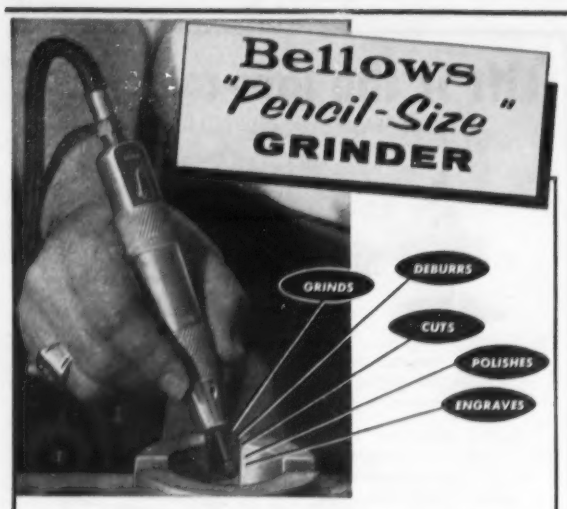
Picks up oil and other accumulated liquids under machine without any conversion.

WRITE FOR CATALOG 660 NOW!

BREUER ELECTRIC MFG. CO.

5116 North Ravenswood Avenue • Chicago 40, Illinois

▲ For more details circle NED-447 C7 on enclosed inquiry slip ▲



No shop can afford to be without this fast, flexible air-powered grinder. 100,000 RPM at 80 lbs. air pressure. Weighs only 5¾ ounces. Fits the hand like a pencil. Only one moving part. Takes ¼" diameter cutting tools (⅛" shank).

Write for Bulletin PG10

658-B

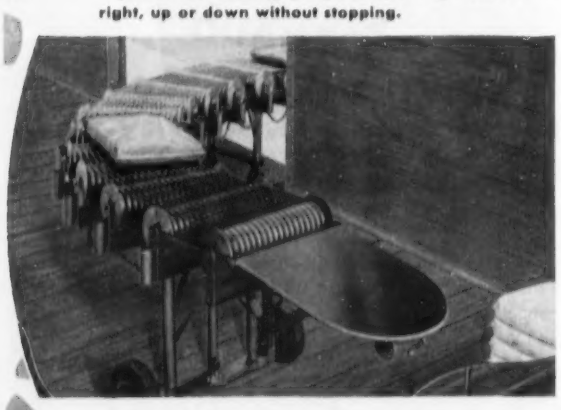
The Bellows Co.
AKRON 9, OHIO

For more details circle NED-449 C7 on enclosed inquiry slip

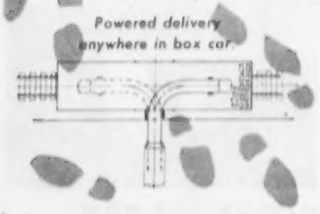
SAVE 2160 STEPS in loading every box car!

You need no longer send men for bags... POWER-CURVE loading delivers bags into the very end of box car or truck . . . saves hundreds of hand truck trips because you convey all the way.

The POWER-CURVE operator easily slides bags onto stacks anywhere in the car. Self-propelled loader withdraws under its own power as loading progresses, swings left or right, up or down without stopping.



You can cut loading costs ⅓ or more over hand trucking, increase plant output with mechanized flow at maximum rate, packer to stacker. Write for catalog and sketches of actual installations, complete POWER-CURVE system of conveyors, and records of savings in plants loading or unloading chemicals, flour, feed, fertilizer, starch, salt, cement, etc., with POWER-CURVE.



POWER-CURVE CONVEYOR CO.
2185 SOUTH JASON STREET
DENVER 23, COLORADO

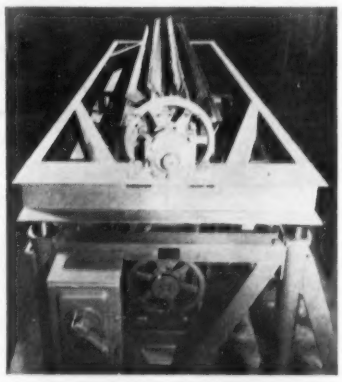
For more details circle NED-450 C7 on enclosed inquiry slip

CUTOFF SAW
cuts ferrous and nonferrous metals

Setting up this cutoff saw for any run, including changeover from ferrous to nonferrous metals, requires only 1½ minutes. It will cut up to ¾-in steel bar stock in production runs, or larger stock for tooling or short runs. Nonferrous stock up to 1½ in. can also be production cut. Use can also be for cutting off taps, drills, tool bits, milling cutters and tool steels. Saw incorporates a fast-acting heavy duty integral vise. Saw is aligned on all planes and offers protection against blade disintegration. Made by **Kenco Mfg. Co.**, Dept. NED, 5211 Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-451 C7 on enclosed inquiry slip

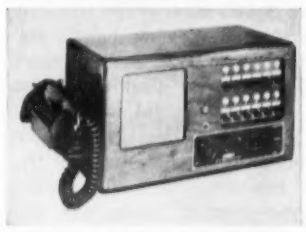
BRUSH SANDING DRUMS
polish wide metal sheets



Wide metal sheets can be sanded or polished by line of brush - sanding drums ranging from 37 to 74 in. wide. Fiber brushes spaced around circumference of drum back up series of abrasive strips that feed out from inside drum and wipe against stock with smooth resilient action. Low areas, warps or sinks are sanded without the necessity of grinding down high spots. Abrasive is fed out of drum as required. Made by **Merit Products**, Dept. D, 4023 Irving Pl., Culver City, Calif.

For more details circle NED-452 C7 on enclosed inquiry slip

INTERCOMMUNICATION SYSTEM
includes speaker and handset



Privacy on calls between any two master stations is possible with the Kwik-Kall intercommunication system which employs a single pair of wires for annunciator and voice. Annunciators of multiple station unit afford both visual and audible indicator. Speaker and handset are included in each unit, the former disconnecting when the handset is lifted. Master station may include paging and/or secret two-way communication by including a public address paging key. Conference calls are possible with selected stations. Made by **J. M. Loge Sound Engineers**, Dept. NED, 2171 W. Washington Blvd., Los Angeles, Calif.

For more details circle NED-453 C7 on enclosed inquiry slip

OPERATIONS RECORDER
produces inkless stylus tracing

Consisting of drum which rotates at speeds from once every 4 minutes to once in 24 hours, model MD-jr operations recorder shows when and how long a machine operates or produces. Stylus presses through opaque white wax layer to expose contrasting color of paper underneath. No ink is used. Lead screw is subject to axial motion from magnet responding to input signal to cause vertical line. Thus, more than 400 linear inches of accurate recording can be obtained on waterproof, easily-filed 6 x 14-in. chart. On 24-hour rotation, any given instant of successive days is comparable since these line up vertically. Styli coils for 6 to 220 v ac or 6 to 120 v ac are available. Transparent cover keeps out dust. Made by **Gorrell & Gorrell**, Box 10, Haworth, N. J.

For more details circle NED-454 C7 on enclosed inquiry slip

FASTER... SURER... INSPECTION

PRICES START FROM $10.95

Hundreds of uses, FLASH-O-LENS spotlights area it magnifies, speeds inspection, adds accuracy. Battery, plug-in models.

PIKE REG. U. S. PAT. OFF.

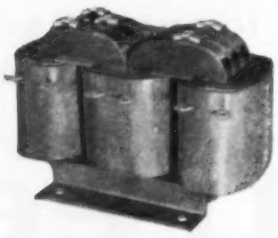
WRITE TODAY for literature showing uses, types, prices

Established 1927

E. W. PIKE & COMPANY
498 North Avenue • Elizabeth 3, N. J.

For more details circle NED-455 C7 on enclosed inquiry slip

Let HEVI-DUTY Saturable Reactors control your power requirements



Hevi-Duty Saturable Reactors are used for the manual or automatic control of power to a load on electrically heated equipment, motor starting circuits, test boards and many other industrial power uses.

By changing the magnetic characteristics of the reactor core, the impedance can be varied by a direct current control winding. This feature provides:

1. *Stepless control in the AC power circuit.*
2. *A wide range of control with smooth and even adjustment over the entire range.*
3. *Small voltage drop in reactor at full saturation permits 90 percent of the line voltage to be applied to the load.*

If you have a Saturable Reactor application, Hevi-Duty engineers will be glad to recommend or design the proper size, either open or enclosed style. Write for Bulletin 500.

HEVI-DUTY ELECTRIC COMPANY
HEAT TREATING FURNACES HEVI-DUTY ELECTRIC EXCLUSIVELY
DRY TYPE TRANSFORMERS — CONSTANT CURRENT REGULATORS
MILWAUKEE 1, WISCONSIN

For more details circle NED-456 C7 on enclosed inquiry slip

Farm machinery, automotive, electrical, home appliance and industrial equipment manufacturers save money with rolled, split bushings. In bimetal (bronze, babbitt or sintered copper-lead on steel) they can give bearing performance at bushing costs. Plain bushings in bronze, steel or aluminum. Oil holes, grooves, cut-outs; straight, lock or special seams available. Wide size range. Write for complete information.

FEDERAL-MOGUL DIV.
Federal-Mogul-Bower Bearings, Inc.
11079 SHOEMAKER, DETROIT 13, MICHIGAN

For more details circle NED-457 C7 on enclosed inquiry slip

TWEETEN Marker
THE PENCIL OF 1000 USES

Marks a Mile for

25c

on any surface

Wet * Dry * Frozen

Soft * Hard * Rough

Heavy duty fountain pen size. Extra Long 3½" Colored Refills.

BLACK
RED
BLUE
GREEN
YELLOW
WHITE

The choice of Industry.

Order from your Supplier

TweeTen Fibre Company

2029 W. Fulton St. Chicago 11, Ill.

For more details circle NED-458 C7 on enclosed inquiry slip

NEW...

ALUMINUM **Safety-Step LADDERS**

LIGHT

STRONG

NON-CORROSIVE

1 TO 4 STEPS

Sturdy Ballymore Safety-Step Ladders are now available in 7 new feather-weight, non-corrosive aluminum models . . . for average work levels up to 8' high. Ladders roll easily on ball-bearing casters . . . lock automatically to floor when you step on. All-welded construction gives maximum strength.

Write today for free catalog sheet to Ballymore Company, West Chester 3, Pa.

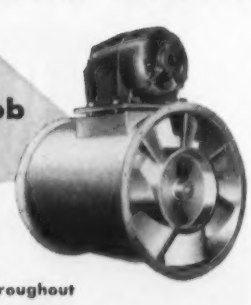
BALLYMORE LADDERS

For more details circle NED-459 C7 on enclosed inquiry slip

7 reasons why

Hartzell Vaneaxial Blowers

- last longer
- do a better job



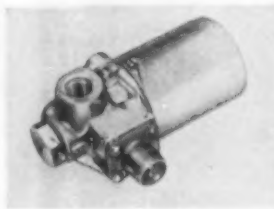
- all-welded construction
- heavier gauge steel throughout
- dynamically-balanced, aluminum-alloy impellers
- certified ratings
- no maintenance problems
- totally-enclosed belts
- top quality, name-brand motors

For complete details, call your nearby Hartzell field engineer or write for Bulletin A-110.

HARTZELL PROPELLER FAN CO.
Div. of Castle Hills Corp.
406 Thomas Blvd., Piqua, Ohio
ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-460 C7 on enclosed inquiry slip

SOLENOID VALVE
two-way unit for 6000-psi service



Weighing only 0.7-lb and having a flow area of about 0.125-in., the MV-100 multipurpose two-way solenoid valve can be used in 6000-psi service. By changing the seal material, the valve is usable with almost any line fluid. Solenoid is activated by 28 v dc, or can be supplied for 124 v, 400 cycles ac. Valve, furnished normally open or normally closed, has stainless steel interior. Made by **Marotta Valve Corp.**, Box 330-51, Boonton, N. J.

For more details circle NED-461 C7 on enclosed inquiry slip

HEAVY DUTY CASTER
swivel type supports 5-ton loads

Kingbolt with 1-in. diameter, ⅝-in. thick steel top plate, 1-in. thick lower top plate, combination dust guard and grease seal, and pressure grease fittings are features of HX300 series Super-Load caster. Suited for loads up to 5 tons, it has Timken tapered roller bearings and Aetna self-contained ball race for load bearing, swivel action. Adjustable slotted nut provides 30-degree turn for swivel take-up. Reinforced semisteel wheels with 1-in. axle bolt have two Timken combined radial and thrust bearings. V-grooved wheels are also available. Made by **Faultless Caster Corp.**, Dept. NED, 1521 N. Garvin St., Evansville, Ind.

For more details circle NED-462 C7 on enclosed inquiry slip

SCRUBBER-VACUUM MACHINE
floor machine is self-powered

Gasoline or propane operated, self-powered Scrubber-Vac combination floor machine is offered with 18, 30 and 36-in. brush spreads. It automatically applies the cleaner, scrubs and picks up (damp dries), with one engine operating all working parts. Two larger sizes can be equipped with a flush-rinse. Slight pressure on hand clutch lever adjusts speed up to 150 fpm on the 18-in. size and to 136 fpm on other two units. Monoxide eliminator, powder dispenser and rinse assembly are accessories. Made by **Finnell System, Inc.**, Dept. NED, 5500 East St., Elkhart, Ind.

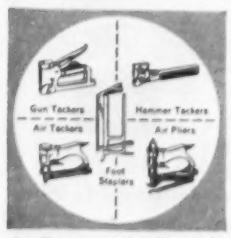
For more details circle NED-463 C7 on enclosed inquiry slip

Tough jobs are easy with DUO-FAST Air-Powered Staple Tackers

The skill is built-in!

Even inexperienced workers do a better job faster with DUO-FAST Automatic Air Tackers. A flick of the trigger . . . and air does the rest. Drive up to 3 staples a second. Extended front lip gives you pin-point accuracy.

Free Service. DUO-FAST tool above is one of 150 staple-tacking models. All carry a Free Service Guarantee.



Send today for free Bulletin FT-27 on DUO-FAST Automatic Air Tacking. Write *FASTENER CORPORATION, 858-60 Fletcher, Chicago 14, Ill.*

DUO-FAST
Staplers • Tackers • Staples

7169

For more details circle NED-464 C7 on enclosed inquiry slip

EDMONT CASE NO. 421: Handling tank treated parts in metal products plant in Michigan, ordinary neoprene gloves averaged 30 shifts wear. Job-fitted Edmont No. 922 gauntlets, coated with Neox, a specially reinforced neoprene compound, lasted 160 shifts - more than 5 times longer wear.

Outwore ordinary neoprene 5 to 1

No. 30

Over 30 types of Neox, natural rubber and plastic coated work gloves.

Edmont JOB-FITTED GLOVES

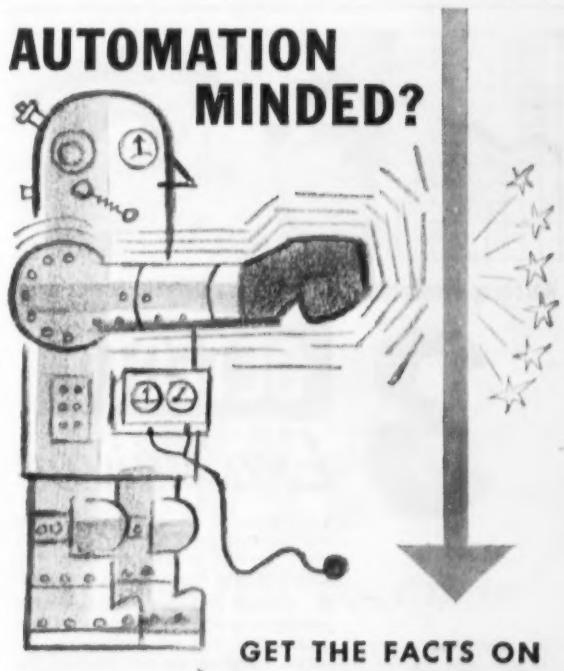
The above case history is typical of the savings available to employers or employees through the use of correctly job-fitted work gloves. Safer and faster work handling can also be achieved.

MAKE THIS FREE TEST: Tell us your operation, materials handled and temperature condition. We will gladly recommend the gloves that best fit your requirement and supply samples for on-the-job test.

Edmont Manufacturing Company
1240 Walnut St., Coshocton, Ohio

For more details circle NED-465 C7 on enclosed inquiry slip

AUTOMATION MINDED?



GET THE FACTS ON

ELECTRO PUNCH Jr.

- A compact electric impact hammer for fixed single-purpose applications.
- Can be mounted in any position.
- Accurately controlled impacts to 3500 lbs.
- Lightning fast strokes up to 120 a minute.
- Major manufacturers use it to STAKE — RIVET — MARK — SHEAR — CRIMP — PUNCH — CUT-OFF.

Write for free folder showing complete line of Black & Webster solenoid-operated production tools.

BLACK & WEBSTER, INC.

Dept. 1, 445 Watertown Street, Newton 58, Mass.

SOLENOID-OPERATED PRODUCTION TOOLS

For more details circle NED-466 C7 on enclosed inquiry slip

Here's Everything You Want in a FAST-THREADING Portable Pipe Machine

RANGE: ½" TO 2" PIPE
EXTRA RANGE: ⅛" TO ¾"
RANGE WITH DRIVE SHAFT: 2½" TO 12"

OSTER No. 552 Pipe Master

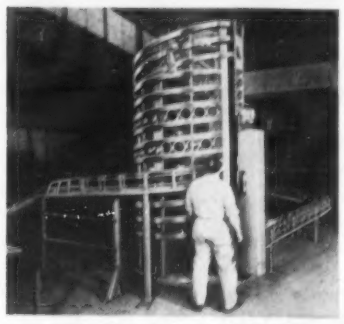
THREADS 1" PIPE 10 TIMES FASTER THAN BY HAND!

See your nearby Oster Selective Distributor for complete details.

The Oster Manufacturing Company • 1311 East 289th Street, Wickliffe (Cleveland), Ohio

For more details circle NED-467 C7 on enclosed inquiry slip

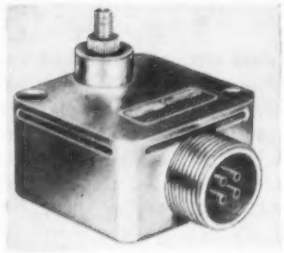
PARTS STORAGE UNIT
rotary unit feeds automated lines



High capacity rotary storage unit for parts or blanks that can roll offers a demand feeding system for automated processing lines. Pneumatic unit shown has a capacity of over 300 gear blanks. Each unit is custom - engineered to a specific job and assembled from standard components. Rotary form is either circular or oval to fit the floor area. Parts are guided through a silhouette accept-reject device to caged double tracks and gravity fed to the push type elevator, operated by a pneumatic piston. Parts can be positioned vertically or horizontally for the next machining operation. Unit automatically stops when full capacity is reached. Made by **Michigan Tool Co.,** Gear-O-Mation Div., 7177 E. McNichols Rd., Detroit 12, Mich.

For more details circle NED-469 C7 on enclosed inquiry slip

MINIATURE LIMIT SWITCH
has 360-degree rotary motion



Hermetically sealed No. 9135 miniature limit switch has a 360-degree rotary action with 180-degree overtravel. It has potted leads or pin connectors and is mounted flat with four fasteners or mounted vertically behind a retainer with washer and locknut. Size is 2 x ¾ x 1 in. Heavy nickel silver case withstands shock. Switch operates at 28 v dc or 110 v dc with a 10-amp resistive rating, 4 amp inductive. At 110 v ac (60-400 cycles or 220 v) the resistive rating is 10 amp. Made by **Haydon Switch, Inc.,** Dept. N, 536 S. Leonard St., Waterbury 20, Conn.

For more details circle NED-470 C7 on enclosed inquiry slip

PRECISION AIR GAGE
improved unit unharmed by water, oil

Improved model DA-1-R1 Dimensionair air gage is now less subject to outside air line conditions and handling faults. Effect of oil and water seepage into the gage has been minimized. Filter mounted on gage itself has transparent cup to observe contents of air line. Gage is set with a master. Smaller, yet more efficient regulator, which permits an overall reduction in size of the Dimensionair, can be held in correct setting position with check nut. A more positive zero adjustment is self-cleaning to eliminate contaminants in zero setting valve. All parts are quickly accessible for repair. Made by **Federal Products Corp.,** 1118NR1 Eddy St., Providence 1, R. I.

For more details circle NED-471 C7 on enclosed inquiry slip

RECTIFIER TUBES
half-wave mercury vapor type

Two half-wave mercury vapor rectifier tubes, developed for use in high voltage rectifier circuits supplying direct current power with good regulation to industrial equipment, will resist shock and vibration. Except for their bases, the two models are alike. Three of either type, when used in a suitable circuit, are capable of supplying up to 51 kw up to about 9500 v dc. Six tubes in a series three-phase circuit with quadrature operation can supply up to 143 kw to about 19,000 v dc. Made by **Radio Corp. of America,** RCA Tube Div., 33rd Floor, 744 Broad St., Newark 2, N. J.

For more details circle NED-472 C7 on enclosed inquiry slip

Watching Production Costs? Choose Detecto Scales with

3 DETECTO *Exclusives*

1. Exclusive all-steel construction and all-steel lever system (*not cast iron*) assures longer, trouble-free scale life and less maintenance cost.

2. Unique outboard bearing design prevents platform tipping. This means that you get *completely* accurate weighing on any part of the scale.

3. DETECTO's tare and weigh beams extend the dial capacity 125%. This means that you get greater gross weighing with minimum dial graduations.

Fractional weighing errors may seem inconsequential, but they add up to a staggering annual loss. When materials mean money, you are wise to depend on DETECTO, the most dependable name in precision industrial scales for more than half a century. DETECTO makes scales for every industrial need, ranging from 1/100 oz. to 50 tons. Models for packaging, parcel post, printing, counting, over-under attachment, portable beam, etc. Write for free, no-obligation catalog.

SALES and SERVICE in all principal cities

Detecto Scales, Inc.
510 Park Avenue, Brooklyn 5, N. Y.
Since 1900

Gentlemen:
Please send me catalog #651 describing DETECTO precision industrial scales. This, of course, obligates me in no way.

Name.....
COMPANY.....
City.....Zone.....State.....

For more details circle NED-468 C7 on enclosed inquiry slip

Quadriga Quality means METAL STAMPINGS

ITEM: 13" blank of 13 gauge steel . . . 4 operations . . . approx. 2" depth of draw . . . O.D. tolerance ±.003".

ITEM: 9¾" blank of 14 gauge steel . . . 5 operations . . . approx. 1¾" depth of draw . . . O.D. tolerance ±.003".

ITEM: 3¾" blank of 20 gauge brass . . . 2 operations, (a) compound blank and pierce, (b) sheer form . . . consistent angle to vanes . . . close tolerances.

ITEM: 7½" wide strip of 20 gauge steel . . . 6 station progressive die . . . close tolerances.

ITEM: 1⅛" wide strip of 26 gauge steel . . . 4 station progressive die . . . close tolerances.

Any metal, medium to high quantity. Depth of draw to 3½ inches . . . press capacities to 150 tons. Send B/P or specs for estimate. Request catalog on your company letterhead.

THE Quadriga MFG. CO.
221 WEST GRAND AVE. • CHICAGO 10, ILL.

For more details circle NED-473 C7 on enclosed inquiry slip

Simple Arithmetic . . .

Type 302, Sheet Base Price 50.00 cents/lb.

Type 430, Sheet Base Price − 39.25 cents/lb.

Saving 10.75 cents/lb.

Now you can *SAVE* at least $215 PER TON in Stainless Steel Sheet Costs!

. . . Because Washington Steel, in answer to the current nickel shortage has taken two big steps forward:

1. Making available an adequate and dependable source of supply for Type 430 stainless steel.
2. Reducing the base price of MicroRold Type 430 sheets to provide you with a savings of $215 per ton as compared to Type 302 stainless sheets.

Write today for your copy, "Care and Use of 430 MicroRold Stainless Steel"

Washington Steel *Corporation*
3-R WOODLAND AVE., WASHINGTON, PA.

For more details circle NED-474 C7 on enclosed inquiry slip

Erickson

THE WORKHORSE OF LIFT TRUCKS

F-3W, F-4W
F-8R, F-10R
F-12R, F-16R
P-7A, P-10A

Model F-2W
Capacity 2,000 Lbs.

Every Erickson is tailor-made for your job—any lift desired, any size or style of fork, any attachment. A perfectly balanced truck with best traction outdoors and maneuverability indoors. Proven by 30 years' performance in the rugged concrete block industry.

12 Fork Models 2,000 to 20,000 lbs.
5 Platform Models 5,000 to 15,000 lbs.

WRITE FOR CATALOG AND PRICES

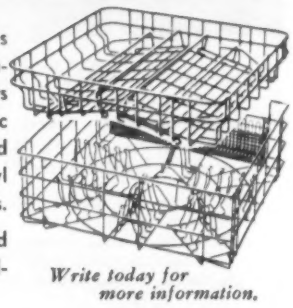
ERICKSON POWER LIFT TRUCKS, INC.
247 St. Anthony Blvd. N.E., Minneapolis 18, Minn.

For more details circle NED-475 C7 on enclosed inquiry slip

Formed Wire Products

ALL SIZES, SHAPES AND WEIGHTS

FLAT OR ROUND WIRE TO ½" DIAMETER



Made to your specifications in production quantities. Resistance welded at all points of contact. Available in zinc plate with zinc chromate and lacquer or dipped polyvinyl to your color specifications.

Fast, efficient delivery geared with your production schedules.

Write today for more information.

Peerless FORMED WIRE PRODUCTS

PEERLESS WIRE GOODS COMPANY, INC.
2706 FERRY STREET · LAFAYETTE, INDIANA

For more details circle NED-476 C7 on enclosed inquiry slip

THE *One-coat*
HEAVY DUTY PROTECTIVE COATING

For Structural Steel • Tanks • Stacks Walls and Floors • Tank Truck Exteriors

Outstanding resistance to chemicals, acids, alkalies and solvents . . . withstands extreme weathering . . . can be applied by brush or roller coating . . . dries to touch in six hours.

SERIES E-900 COATINGS are high solids modified epoxy formulations which result in superior toughness, resistance to abrasion and excellent adhesion to any clean surface.

Regularly available in . . . clear . . . white . . . gray . . . and sea-foam green. Because of high solid content, 95% of the applied thickness is converted to a protective film.

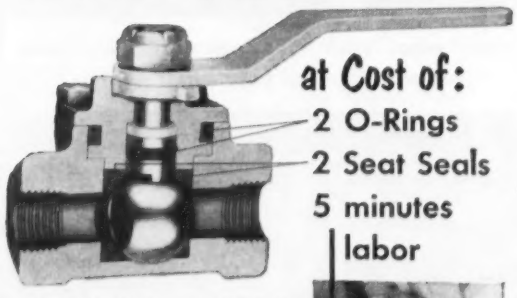
Write today for Technical Bulletin E-900

7300-CC

THE CEILCOTE COMPANY INC.
4838 Ridge Road · Cleveland 9, Ohio

For more details circle NED-477 C7 on enclosed inquiry slip

Install "NEW" Valve



at Cost of:
2 O-Rings
2 Seat Seals
5 minutes labor

That's all it takes for easy TOP ENTRY "in-line" maintenance of Worcester's new TWIN SEAL BALL VALVE.* To replace sealing components, simply remove the four bonnet bolts, and then the bonnet assembly. Ball and seat rings are easily lifted out by using hook in the hole provided in the stem slot. After cleaning seating surfaces in the body, replace ball and new seat rings as a unit. A new O-ring at the bonnet joint and around the stem will assure tight seals at these critical points. Result? . . . "factory tight" sealing properties in your long lasting Worcester TWIN SEAL Ball Valve . . . plus flexibility of seat selection to suit a great variety of media.

*Patents Pending

Ball Gate Needle Valves

Write for full particulars

WORCESTER VALVE CO., INC.

18 PARKER ST. • WORCESTER, MASS.

For more details circle NED-478 C7 on enclosed inquiry slip

BATTERY CELL FILLER shuts off at correct level

Water is added to battery cells to just the right height without overflushing with the Rite-Hite cell filler. A 15-in. horizontal and a 9-in. vertical model are best adapted to industrial-truck use. The filler, connected to water supply of 20-50 psi consists of long tube for reaching across large batteries. It shuts off automatically when proper level in cell is reached. Manually operated by lever, filler is also handy for washing off the top of battery cells. Since nozzle on filler is removable and threaded into a coupling on the tube, filler can be adapted to filling all types of batteries. Made by **Gould-National Batteries, Inc.**, 467 Calhoun St., Trenton 7, N. J.

For more details circle NED-479 C7 on enclosed inquiry slip

WET BLAST HONING UNIT cleans, deburrs, finishes or polishes precision components

Water-borne abrasives in any mesh from 30 to 5000 are used by this Clemco Wet Hone machine to clean, deburr, polish or liquid hone parts of all kinds. Any desired surface finish is obtainable by simple changeover of abrasive and accurate control of wet blast pressure. Both the blast and window washer are controlled by foot pedals. Pump agitation of slurry assures uniformity for the abrasive blast. Any desired grade or type of abrasive can be used.

Illustrated standard size machine has a 29 x 35-in. sliding door opening and is equipped with dual exhaust filtered blower system to minimize fog and dust. Tungsten carbide nozzle gun is light in weight for easy manipulation. Entire interior of blast chamber is floodlighted. Only connections required are air, water and electricity. Pump is used to empty abrasive slurry and new abrasive can be added immediately. Pressure is regulated by hand operated control, and pushbutton controls electrical system. Special machines for large parts can be supplied. Made by **Clementina Ltd.**, Dept. N-12, 2277 Jerrold Ave., San Francisco 24, Calif.

For more details circle NED-480 C7 on enclosed inquiry slip

ISLAND
LIGHT DUTY SLIDE BED BELT CONVEYOR TABLE

Economical to operate
Easy to install

A LOW COST CONVEYOR that grows with your needs.

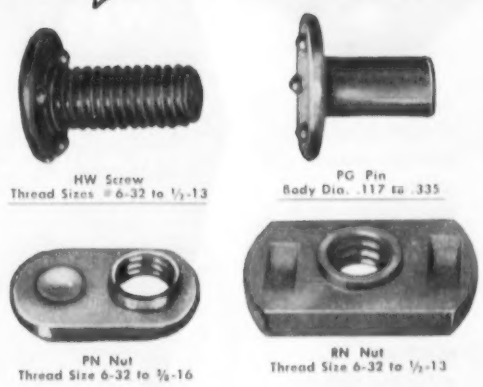
Can be added to for any needed length CONSTRUCTED OF STANDARD PARTS

Dept. NE-3 *Write for bulletin USB-1.*

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North, Long Island City 1, N. Y.

For more details circle NED-481 C7 on enclosed inquiry slip

OHIO RESISTANCE WELDING FASTENERS



OHIO offers . . . over 400 stock parts . . . shipment same day orders received . . . recommended weld set-ups and technical engineering assistance on request . . . indestructible welds guaranteed on every part because of special design and materials used.

Samples and Information Available Upon Request

1905 Over 50 years of dependable service 1957

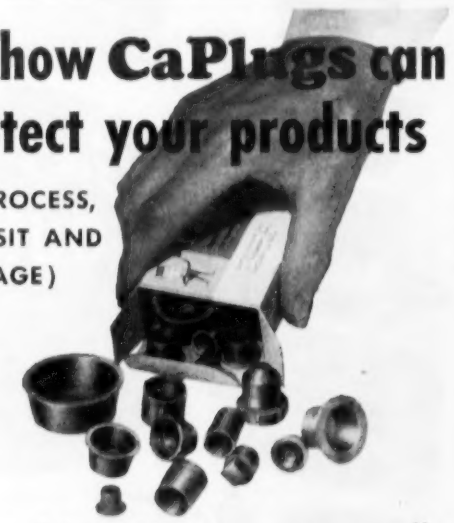
Specialists in the Manufacture of Weld Fasteners and Adjusting Screws

THE OHIO NUT AND BOLT COMPANY
14 First Avenue Berea, Ohio

For more details circle NED-482 C7 on enclosed inquiry slip

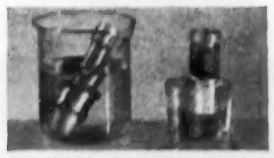
see how CaPlugs can protect your products

(IN PROCESS, TRANSIT AND STORAGE)



test this FREE assortment*

SEE HOW EASY THEY SLIP ON...AND OFF! Made of tough, flexible Polyethylene, tapered (non-threaded) CaPlugs can be used as caps or plugs, inside or outside of threaded or plain fittings. Threaded styles are knurled to spin on or off with ease. Costing less to buy, they cost less to apply.



SEE HOW THEY WITHSTAND ACIDS, SOLVENTS, HEAT AND COLD... and keep out dust and moisture, too. Dunk a CaPlugged product in any solution. CaPlugs are impervious to most common chemical reagents, acids and solvents...withstand temperatures from −94°F. up to 175°F.

SEE HOW TOUGH THEY ARE. For proof, drop a product on its CaPlug...tap it with a mallet...or make a trial shipment of parts with CaPlugs applied. You'll find that these versatile closures provide "kid-glove" protection and will not collapse, chip, break or shred under the most severe of conditions.

***YOU'RE INVITED TO TEST Ca Plugs** in any way you choose. Ten different styles are promptly available in over 300 stock sizes. The coupon below will bring you a random assortment plus illustrated literature. Additional samples in specific sizes for testing are also yours for the asking (details in literature).

MAIL THIS COUPON FOR FREE SAMPLES

CAPLUGS DIVISION
PROTECTIVE CLOSURES CO., INC.
2209 Elmwood Ave., Buffalo 23, N. Y.

RUSH free assortment of CaPlugs, literature and prices to us.

NAME _____ TITLE _____
FIRM _____
ADDRESS _____
CITY _____ ZONE ____ STATE _____

For more details circle NED-483 C7 on enclosed inquiry slip

MAKE THESE PRODUCTS?

dental instruments
hardened balls
instrument shafts
novelties
piston rings
pivot pins
surgical instruments
surgical needles
textile reeds and heddles
wire forms
and similar products

Work with WEBB Stainless Wire

Type 410
Type 420
Type 430
Type 440-B
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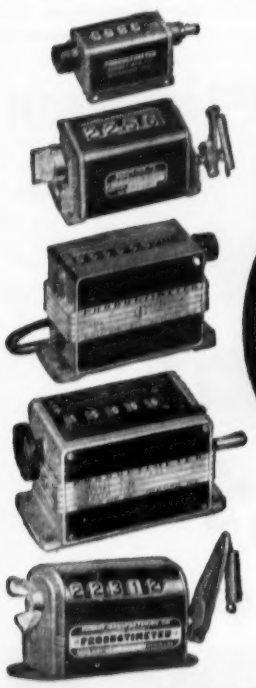
Quality is the big difference in Webb Stainless Wire. Discover how Webb quality can help you reduce fabricating costs and improve the quality of products that require corrosion and heat resistance. Send for data sheet giving more details on the "400 Series" and other types of Webb Stainless Wire.

Write today!

The Carpenter Steel Company
WEBB WIRE DIVISION
New Brunswick, New Jersey

For more details circle NED-485 C7 on enclosed inquiry slip



Get the **COUNT!**

Durant Sales Engineers will supply a PRODUCTIMETER for every and any counting need in your plant.

Send for Bulletin #101

DURANT MANUFACTURING CO.
1922 N. Buffum St., Milwaukee 1, Wis.
22 Thurbers Ave., Providence 5, R.I.
Representatives in Principal Cities

PRODUCTIMETERS SINCE 1879 *Count Everything*

For more details circle NED-486 C7 on enclosed inquiry slip

5-SECOND APPLICATION!

FOR INSULATION ANCHORS and FASTENERS

Use **Stic-Klips®**

- No Surface Drilling
- Quick Fastening
- Strong Positive Bond

Stic-Klips® are time and labor saving fasteners for attaching insulation, strapping, metal lath wall fixtures, wiring and conduit to curved or flat, metal or masonry surfaces.

Application takes only seconds. All you do is apply a thin coat of Stic-Klip® adhesive to the base of a Stic-Klip® fastener with a putty knife. Apply another thin coat as primer base on porous surface area. Place Stic-Klip® fastener to primer base until adhesive fills holes. Clean off excess adhesive with putty knife.

Write for your application bulletins, Today!

Stic-Klip® MANUFACTURING CO. 64 Regent St. Cambridge 40, Mass.

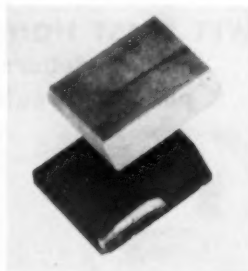
For more details circle NED-487 C7 on enclosed inquiry slip

PORTABLE WELDING SHIELD
improved with heat-resistant fabric

Self-standing Spa-Fla portable welding shield is now offered in an improved type with Ray-Tex all-purpose heat fabric. Ray-Tex adds such features as positive resistance to high radiant heat, dirt, oils and greases, water, mildew and to most acids and alkalies. Easily rolled and carried from job to job, the 48 x 72-in. shield weighs less than 20 lb. Made by **Frommelt Industries,** Dept. 55-L.D.S., Box 165, Dubuque, Iowa.

For more details circle NED-488 C7 on enclosed inquiry slip

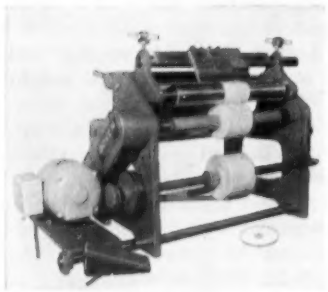
OXIDE CHIP BREAKERS
resist wear and cratering



Chip breakers are now available made of the same ultra-hard, abrasion-resistant oxide materials as used in high-speed oxide cutting tools. Resistance of these breakers to wear and abrasion helps sustain their position in reference to the cutting tool edge and reduces the chance of chips getting out of control, especially during high-speed machining. Diamonite chip breakers can be used with any type of tool holder which will accommodate its design. Photo shows oxide (top) and carbide breakers, both after removing 368 cu in. of AISI 4140 alloy at 500 fpm surface speed. Made by **Diamonite Products Mfg. Co.,** Dept. N, Canton 2, O.

For more details circle NED-489 C7 on enclosed inquiry slip

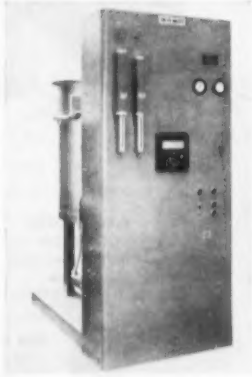
TEFLON & PLASTIC SLITTER
cuts any gage as narrow as 1/8-in.



Teflon, plastic, leatherette, paper, fiber, cellophane, acetates and foils can be slit by this 18-in. bench model slitter. Any gage of Teflon as narrow as 1/8-in. can be handled. It takes parent rolls up to 18 in. wide by 12 in. diameter with cores from 1½ to 3 in. Size is 30 x 20 x 20 in. Machine loads, threads, slits, rewinds and adjusts from the front, operates on the single rewind principle, and will not fuse or interleave. A stop-and-start foot switch controls inching. Its three-speed motor operates on 110 v ac. Made by **Doven Machine & Engineering, Inc.,** 2708 W. Van Buren St., Chicago 12, Ill.

For more details circle NED-490 C7 on enclosed inquiry slip

ENDOTHERMIC GENERATOR
used with furnaces for varied uses



The 250 cu ft of atmosphere produced hourly by the model MK-524-EN endothermic generator can be used in furnaces performing such heat treating processes as bright hardening of medium and high carbon, alloy carbon and high speed steels; annealing and normalizing; bright copper brazing; sintering and powder metallurgy processes; and supplying carrier gas for carburizing and carbonitriding. Once unit has reached the proper operating temperature, only operations required are turning on the gas pump and adjusting air and gas flows. When used in a 230-v, single-phase circuit, generator requires no transformer. Safety controls are provided. Made by **Hevi-Duty Electric Co.,** Box 563, Milwaukee 1, Wis.

For more details circle NED-491 C7 on enclosed inquiry slip

Now . . . you can have

THE CLEANEST PLANT IN AMERICA

with a New Kind of Power Sweeper

Powered to OUTPERFORM . . . Engineered to OUTLAST . . . any other sweeper.

This new Wayne embodies features not found in any other power sweeper, including:

1. **Filter-Vac Dust Control** for dust-free operation.
2. **Larger Hopper Capacity** with hydraulic power-dumping. Cleans most plants in one sweep.
3. **More Power** for faster operating speeds and inclines.
4. **Automotive Steering** — maneuvers for close-up cleaning.
5. **More Efficient, Longer-Wearing Brushes.** Get *all* the dirt, even in hard-to-reach places.
6. **Vacuum Attachments** for shelves, bins, equipment, etc.

Four sizes for every need; gasoline, LP gas or battery powered. Ask for an "on the job" demonstration or write for literature.

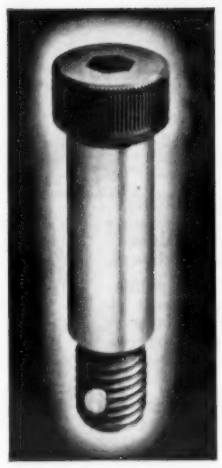
WAYNE

WAYNE MANUFACTURING CO.
1212 E. Lexington Ave.
Pomona, California

World's Largest Producer of Power Sweepers for Cities and Industry.

For more details circle NED-492 C7 on enclosed inquiry slip

NEW—self-locking UNBRAKO shoulder screws



The Nylok* self-locking feature locks these screws securely in place. They won't work loose. Can be used repeatedly. Tough, resilient nylon locking pellets permanently installed. Familiar UNBRAKO knurled heads for sure finger grip and fast assembly—accurate hex sockets for positive nonslip internal wrenching. Heat treated alloy steel, controlled fillets, continuous grain flow, Class 3A threads fully formed close to shoulders for maximum strength and exact fit. Heads, bodies and threads concentric; shoulders held to fine tolerance for perfect fit. Successfully withstand temperatures ranging from —70 to 250°F. Standard sizes ¼ to ¾ in. Write for Bulletin 2193. Unbrako Socket Screw Division, STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

*TM Reg. U.S. Pat. Off., The Nylok Corporation

UNBRAKO SOCKET SCREW DIVISION

STANDARD PRESSED STEEL CO.
SPS
JENKINTOWN PENNSYLVANIA

Unbrako Products are sold through Industrial Distributors

For more details circle NED-493 C7 on enclosed inquiry slip

WHERE WILL YOU HAVE LUNCH TODAY?

—and what lunch hour seating facilities have you provided for your plant people?

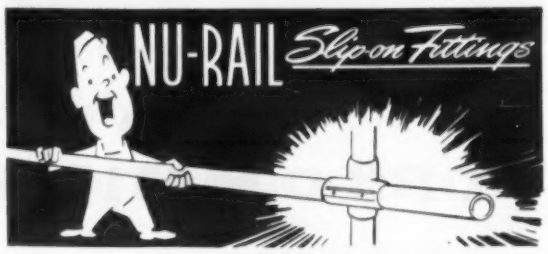
FOLDS UP, ROLLS AWAY WHEN NOT IN USE!

Schieber "Transi-Fold" offers safe, respectable, sanitary seating right in the department. Quality built. Welded tubular understructure. Sanitary surfaces. Used in both large and small plants.

Write for our "In-Plant Feeding" folder

SCHIEBER SALES CO.
12955 Inkster Rd. Detroit 39, Michigan

For more details circle NED-494 C7 on enclosed inquiry slip



plus "factory-stock" I.P.S. pipe

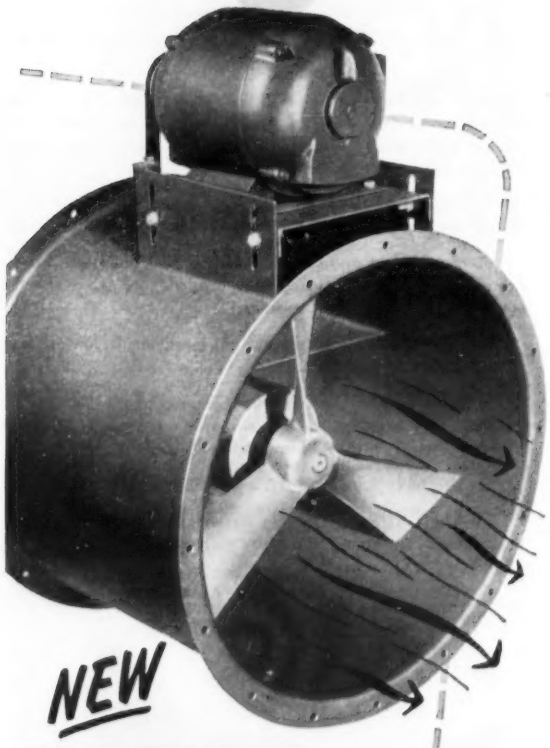
make low-cost racks

NU-RAIL Fittings just slip on, are easily locked to standard pipe. Patented offset design makes construction easy — allows pipe to cross in the fittings without cutting at intersections. Heavier loads supported because longer pipe-lengths make framing stronger; pipe is unweakened by threading or questionable welds. Eliminate excessive pipe-cutting. Plant maintenance men can install —you save up to 80% on labor cost! Write for details.

THE HOLLAENDER MANUFACTURING CO.
3839 SPRING GROVE AVE. • CINCINNATI 23, OHIO

For more details circle NED-495 C7 on enclosed inquiry slip

expel FUMES, HEAT AND DUST at LOW COST



NEW

PROPELLAIR®

belt driven Tubeaxial Fans

Type "BT" Propellair Fans can be purchased and operated at low cost to handle difficult atmospheres such as highly corrosive, explosive, inflammable, grease or dust-laden air. Straight-line design permits easy, inexpensive installation. Platforms and duct elbows are eliminated. The externally mounted Robbins & Myers motor, sealed cast iron housed bearing assembly, air-tight drum and belt-tube provide complete protection. Standard models can handle temperatures up to 450° F. Propellair "BT" tubeaxial fans are available in sizes 16" to 60" for from 2000 to 85000 CFM air delivery.

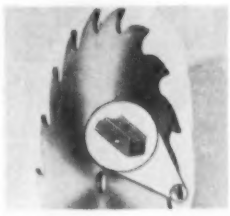
WRITE FOR BULLETIN NO. 620-N

R&M PROPELLAIR®
DIV. OF ROBBINS AND MYERS, INC.
SPRINGFIELD, OHIO
Certified Ratings PMA

MOVING AIR IS OUR BUSINESS

For more details circle NED-496 C7 on enclosed inquiry slip

CEMENTED CARBIDE TIPS
in 4 to 20 per cent cobalt grades

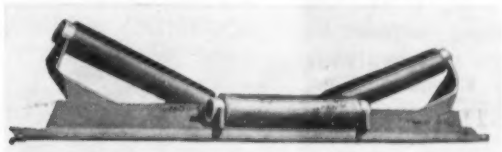


Line of cemented tungsten carbide tool tips available in production quantities includes nonferrous metal cutting grades known as Amermet as well as tips for mining applications. Material grades cover carbide-cobalt series from hard 4 per cent cobalt grade to softer, durable 20 per cent cobalt grade. Shapes and sizes are governed by customer requirements. Saw tip shown has locating groove which simplifies locating during brazing. Made by **Multi Metals, Inc.**, 500 E. Main St., Louisville 2, Ky.

For more details circle NED-497 C7 on enclosed inquiry slip

BELT CONVEYOR BEARING
simplifies replacement of rolls

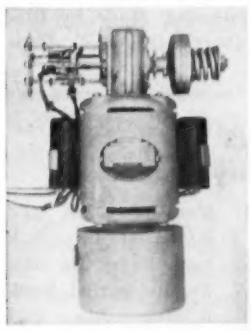
Maintenance on conveyor rolls and return idlers is facilitated by this removable ball bearing stud assembly. Roller shaft turns in bearings mounted in



the removable studs. Maintenance is done at conveyor with rollers remaining on the job. Worn studs are quickly replaced with new bearing-stud assembly and roller shaft then slipped in. Rollers, complete with removable studs, are carried in 2⅜ to 4-in. diameters. Lengths from 12 to over 36 in. are available. Made by **Bearings, Inc.**, 3638 Euclid Ave., Cleveland 15, O.

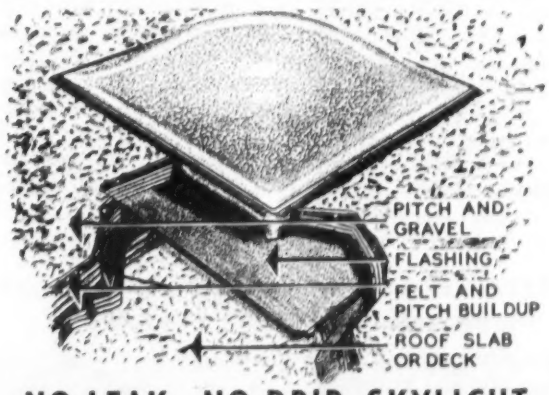
For more details circle NED-498 C7 on enclosed inquiry slip

FHP GEARMOTORS
have output speeds of 144 rpm



Fractional horsepower gearmotors with high starting torques are offered for shaft output speeds of 144 rpm. They can be made instantly reversible and can be equipped with magnetic disk brakes and friction clutches. Adjustable limit switches are available for automatic operation. Gearmotors are suited for use on lathes, measuring devices, instruments, valve operators and many other intermittent duty applications. Made by **Brown-Brockmeyer Co.**, 1002 Smithville Rd., Dayton 1, O.

For more details circle NED-499 C7 on enclosed inquiry slip



NO-LEAK, NO-DRIP SKYLIGHT OF MOLDED FIBERGLASS

Now, buildings with built-up roofs can have ample skylighting without costly framing, hardware, glazing and maintenance and without leakage and condensation drip nuisances.

Molded of universally accepted fiberglass and polyester resins into a solid, one-piece unit, the Consolite Double-Dome Skylight is self-flashing and permits simple, low-cost installation. The strong, double-dome construction is shatterproof, unaffected by weather extremes and provides insulation against condensation drip. It gives high transmission of diffused daylight.

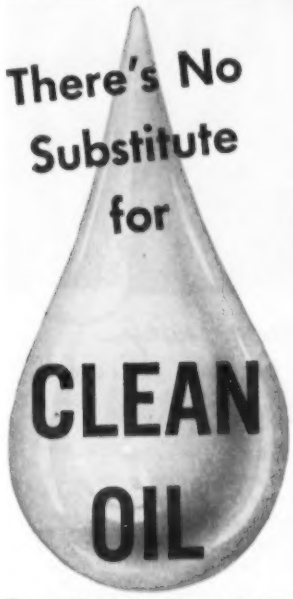
Available in squares, rectangles and rounds, and in self-flashing, bond-type and curb-type models. For complete information, prices, on **CONSOLITE** contact your nearest Resolite Distributor, or

RESOLITE CORPORATION
Box 527
Zelienople, Pa.

Exclusive Sales Agents in Midwestern and Northeastern U.S. and in Canada

For more details circle NED-500 C7 on enclosed inquiry slip

There's No Substitute for CLEAN OIL



Remove Ferrous Grit from Lubricating Oil and Hydraulic Systems with

FERROFILTER®

Permanent Magnet Separators

For complete information on installation and operation; capacities, sizes and dimensions
Write today for BULLETIN PM-56

S. G. FRANTZ CO., Inc.
Brunswick Pike & Kline Ave.
P. O. Box 1138, Trenton 6, N.J.

Low Pressure (to 100 psi) FERROFILTERS 1" and under made this way

Other low pressure models to 3" pipe size

High pressure models also available to 5000 psi.

For more details circle NED-501 C7 on enclosed inquiry slip

2½ TON CRANE ATTACHMENT
one of six accessories for versatile yard machine with exclusive 180° boom swing

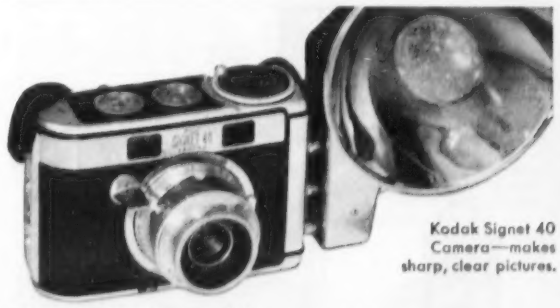
The exclusive 180° boom swing of Pettibone's Speed Swing, utilizing six interchangeable attachments, is one of the features that eliminates the need for

several special-purpose yard machines usually required for the work performed by versatile Speed Swing. The 2½ ton yard crane arm, material handling bucket, fork lift, car spotter attachment, dozer blade and snow bucket enable Speed Swing to do every conceivable yard job. Operation is effortless and worry-free, thanks to Torqmatic power-shift transmission, 2 or 4 wheel booster steering and planetary axles. Write for Bulletin P-264-NC.

THE NEW YARD SENSATION **PETTIBONE SPEED SWING**

Pettibone Mulliken Corp., 4700 W. Division St., Chicago 51, Ill. • SPaulding 2-9300

For more details circle NED-502 C7 on enclosed inquiry slip



Kodak Signet 40 Camera—makes sharp, clear pictures.

Simple but capable camera for record pictures, 35mm slides

With this precise yet easy-to-use camera you can make excellent *record pictures* (black-and-white or color) of safety hazards, job setups, breakage claims, research projects, maintenance problems. And you can shoot top-quality slides for training lectures, sales talks, or technical discussions.

The Kodak Signet 40 Camera gives you a fine *f*/3.5 lens, and shutter speeds from 1/5 to 1/400 second—yet it's simple to use. It's small enough to slip in your pocket, carry along on field trips. You'll like the brilliant viewfinder coupled with rangefinder in a single window. Price—only $69,* including flasholder and two reflectors (for both popular types of midget bulbs).

FREE BOOKLET gives you full details. Write for it.

**List price, including Federal Tax. Subject to change without notice.*

Kodak

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

For more details circle NED-503 C7 on enclosed inquiry slip

Anchor new machinery...

without bolts or lag screws on UNISORB

This means you will be saving 3 ways . . .

- **Cut installation costs up to 30%**
- **Stop 85% of transmitted vibration**
- **Increase machine life**

Unisorb is proved in use under all types of machines — from 30 ton giants down to the smallest precision lathes. FES-15

SEND FOR FREE BOOK AND SAMPLE . . .

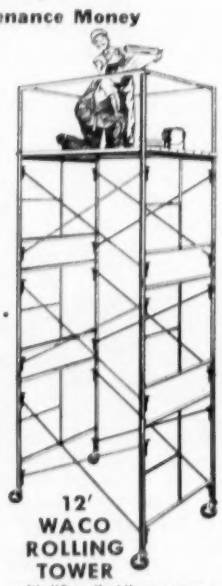
Find out how others have used Unisorb and how it can "pay-off" for you in your plant. Send the reader service card, or write or call:

the **FELTERS** company
224 SOUTH STREET, BOSTON 11, MASS.
REPRESENTATIVES IN ALL PRINCIPAL CITIES
Manufacturers of Felt and Felt Products

For more details circle NED-504 C7 on enclosed inquiry slip

NEW MANUAL tells how WACO Light Duty Rolling Towers Save YOU Maintenance Money

Copy Sent Upon Request



Waco Light Duty Rolling Towers are unparalleled for their versatility. Use Waco Light Duty Rolling Towers and you'll save money by reducing maintenance costs, increasing productivity (because less time is involved in moving, erecting and dismantling) and reducing workman fatigue.

This manual explains further how Waco Light Duty Rolling Towers bring you all these benefits at low cost. For instance, a 12' rolling tower, with free-running rubber casters, and "Speedlock" method of attaching cross-braces to end frames, is only $112.00. Guard rails available at extra cost.

Send for your free manual today.

12' WACO ROLLING TOWER with "Speedlock" only $112.00

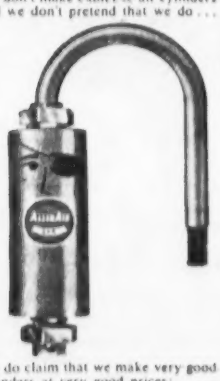
Price includes 4" rubber casters

WACO MANUFACTURING CO.
3565 Wooddale Avenue • Minneapolis 16, Minnesota

For more details circle NED-505 C7 on enclosed inquiry slip

Does VOLKSWAGEN bother *Cadillac?*

We don't make CADILLAC air cylinders and we don't pretend that we do . . .



We do claim that we make very good cylinders at very good prices:

BORE	BASIC PRICE	ADD PER " OF STROKE
1⅛"	$15.50	$.35
1½"	$20.50	$.50
2"	$25.50	$.55
2½"	$29.50	$.65
3"	$32.50	$.95
4"	$47.50	$1.20

We furthermore claim that we work hard to ship from stock and our sales chart tells us that we are being successful on all accounts — PRICE, QUALITY, SERVICE.

Besides cylinders, we also make the ALLENAIR line of AIR VALVES, AIR CLAMPS and DIAL FEED TABLES and if we could tell you right here all there is to tell you about what we offer and how those products can increase your PRODUCTION at MINIMUM COST we wouldn't need the $1.25 24-page catalogue that is available for free this month to anyone seriously interested.

P.S.—The cylinder pictured is a Factory Reject. The only rods available are straight ones and made out of #416 Stainless Steel ground and polished stock and repolished after machining. The bearing is nylon.

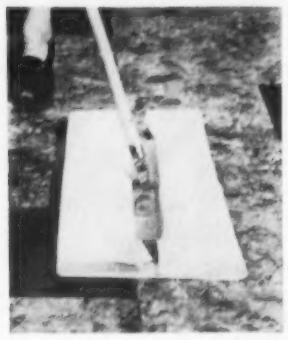
The answer to the question on top of this page is: Not one bit. There is a market for both!

THE A. K. ALLEN CO.
57 Meserole Ave. Brklyn 22, N. Y.

THE A. K. ALLEN CO. 57 Meserole Ave., Brooklyn 22, N. Y. NED-3
Name _____
Company _____
Address _____
City _____ Zone _____ State _____

For more details circle NED-506 C7 on enclosed inquiry slip

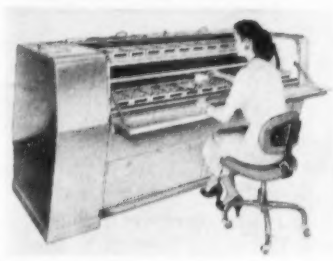
TREATED CLEANING CLOTH
disposable type holds dirt, dust



Floor or wall areas can be cleaned by Masslinn disposable treated cloth, a nonwoven fabric which combines cotton and rayon fibers. Material absorbs and retains dust and dirt with blotter-like action, being impregnated with an emulsion that leaves no deposit and does not create a slipping hazard. Cloth is used with an all-directional, swivel-jointed sweeping tool that can reach under low objects, into corners and between furniture at any angle. Made by **Chicopee Mills, Inc.,** Non-Woven Fabrics Div., 47 Worth St., New York 13, N. Y.

For more details circle NED-507 C7 on enclosed inquiry slip

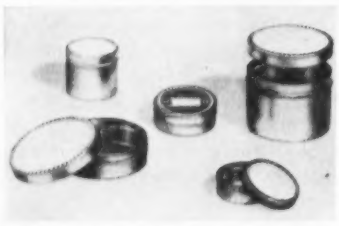
MOTORIZED FILE
records found by pushing buttons



Slanting silhouette of the improved Super Elevator File provides extra knee room for operators. Designated the Super 63, the motorized file finds the right record when a latch type pushbutton is depressed. Desired record tray reaches the correct working position by the shortest and fastest route. Average delivery time is 3 seconds. File accommodates a wide range of record sizes, housing over 200,000 records measuring 3 x 5 in. in 23 sq ft of floor space. Lightweight, easily reached, 13-in. deep trays can be rearranged as desired. A private locker is built into one pedestal. Hand switch permits stopping trays in any position, and provision for emergency hand operation is included. Made by **Diebold, Inc.,** Dept. EF, 818 Mulberry Rd. S.E., Canton 2, O.

For more details circle NED-508 C7 on enclosed inquiry slip

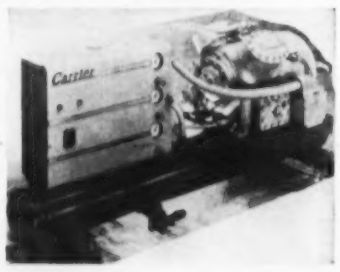
SEAMLESS METAL CANS
package and identify products



Various sizes and styles of LabelStik cans have the outwardly curled Sani-I-Safe edge that does not catch and hold contents or cut fingers. Cans have a "built-in" label in the lid, are seamless and will hold a variety of solid and semisolid products. Style 10 flat, gold lacquered cans are offered in ¼ to 16-oz capacities. Style 20 includes deep, plain cans with plain edge in ½ to 16-oz capacities. Style 40 cans are flat, gold lacquered, have screw tops and are made in ½ to 8-oz sizes. All have plain white labels. Deep seamless cans and labels printed to order are also available. Made by **George D. Ellis & Sons, Inc.,** Dept. N, 4040 N. American St., Philadelphia 40, Pa.

For more details circle NED-509 C7 on enclosed inquiry slip

REFRIGERATION COMPRESSOR
hermetic units of 15 to 60 hp



Open drives employing belt and pulley, gear box, or other couplings are eliminated in line of hermetic reciprocating compressors offered in 15 to 60 hp sizes for air conditioning applications. Compressor and motor are mounted on single shaft hermetically sealed against dust and dirt. Space requirements are thus drastically cut. Also, passage of refrigerant gas through motor housing to cool motor adds to efficiency. Compressors are virtually vibrationless and almost noiseless. Since seals are eliminated, refrigerant gas leakage is avoided. Made by **Carrier Corp.,** 300-A S. Geddes St., Syracuse 1, N. Y.

For more details circle NED-510 C7 on enclosed inquiry slip

Plants everywhere report big savings with

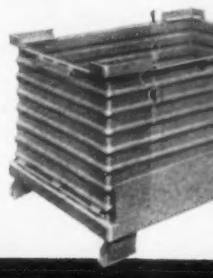
WORK-O-MATIC* BOX

Look at these material handling features...

- **UNIT LOADS...** Transfer, storage, stacking, with fork trucks, just like regular skid boxes.
- **PRODUCTION...** Used with Work-O-Matic positioning stand for automatic work-level material flow. Eliminates tiring waste motion. Boosts production.
- **DUMPING...** Drop bottom feature discharges process material or scrap in nothing flat and with perfect spillage-point control!

*Patent No. 2,445,038. Other patents pending.

You need the complete st
ciate the full extent of savi
big! Units come in vario
sizes for different needs.
Union Metal Manufacturi
Canton 5, Ohio. Ask for



UNION META
Material Handling Equipm

For more details circle NED-511 C7 o

"By installing Fusetron Fuses . . .

We saved from $165 to $225 a year on Solenoid coils and reduced down-periods."

Ed O'Hatnick, Ch. Electn.
Frank Kneeland Plant,
United Eng. & Fdry. Co. Pittsburgh, Pa.

Mr. O'Hatnick continues . . . "The solenoids on the hydraulic clutches of our horizontal boring mills would sometimes stick or slow down when dirt got into the oil.

"When this happened, the tap D. C. solenoid coils would not be pulled in far enough and would burn up.

"Each coil cost about $15. With 12 to 18 of them burning up every year it didn't take long for this to add to a considerable amount of money.

"And even more costly were the production losses that resulted from these shutdowns.

"With hope of reducing these expenses, we decided to individually protect the 72 solenoids in use with 3/10 ampere Fusetron dual-element fuses.

"In the next 3 years only 2 coils burned up.

"We had other favorable experiences with Fusetron fuses that convinced me they can make a plant more effective.

HAROL
Buss Fus

"Tha
Kneela
fuses ca

Don't R
One burne
motor . . . o
destroyed

FOR LOA
FUSES! W
nearest fau

BUSSMAN

For more details circle NED-512 C7 o

EVERY

SKF

Ball Be
Cylindr
Spheric
Tapere

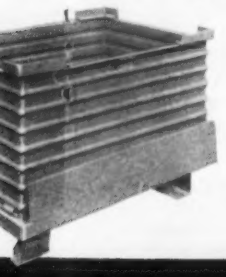
*Reg. U.S.

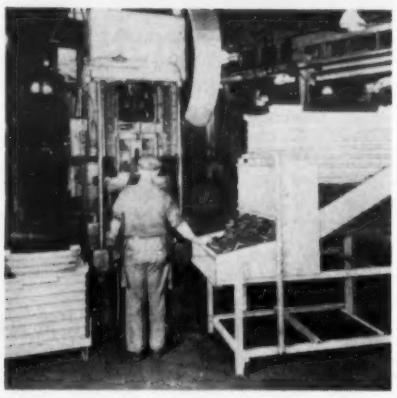
SKF INDUSTRIES, INC.,

For more details circle NED-513 C7

report
th
BOXES!

he complete story to appre-
l extent of savings. They're
come in various types and
fferent needs. Write to The
l Manufacturing Company,
Ohio. Ask for Catalog 83.





ETAL
g Equipment

e NED-511 C7 on enclosed inquiry slip ▲

HAROLD SLACK Jr.
Buss Fuseman

ED O'HATNICK
Chief Electrician

"That's why, upon being transferred to our Frank Kneeland Plant, I made a study to see where Fusetron fuses can be applied to help us reduce operating costs".

Don't Risk Losses!
One burned out solenoid . . . one lost motor . . . one needless shutdown . . . one destroyed switch or panel . . . may cost you far more than replacing every ordinary fuse with Fusetron dual-element Fuses. *Write for bulletin FIS.*

FOR LOADS ABOVE 600 AND UP TO 5000 AMPS.—USE BUSS HI-CAP FUSES! When coordinated with Fusetron fuses they will not open ahead of the fuse nearest fault . . . Write for bulletin HCS.

BUSSMANN MFG. CO. *Division of McGraw-Edison Co.* **St. Louis 7, Mo.**

e NED-512 C7 on enclosed inquiry slip ▲

SOS*?

Bearings needed in a hurry?
Don't panic, keep calm, don't worry
Call on the fastest, reliable source
An SKF distributor, of course.

Stocking all bearings and accessories,
He is factory trained for emergencies
With his door always open for an SOS
Look for the sign reading SKF. 7741

*Situation Of Stress

EVERY TYPE—EVERY USE
Ball Bearings
Cylindrical Roller Bearings
Spherical Roller Bearings
Tapered Roller Bearings ("Tyson")
*Reg. U.S. Pat. Off. Tyson Bearing Corporation

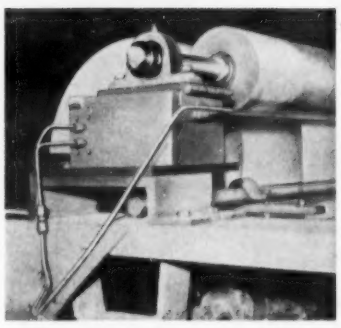
TRIES, INC., PHILADELPHIA 32, PA.
le NED-513 C7 on enclosed inquiry slip ▲

SPRAY GUN RECEIVER
stops clogging from paint hardening

Paint hardening that causes clogging in spray gun nozzles between operating periods is prevented by placing the gun in the Spray Gun Receiver. Gun is ready for instant use because its nozzle tip is kept in a solvent solution when not in actual use. Solution does not come in contact with packing. Reservoir tank maintains the solvent level. Perforated metal fire baffle in the gun port opening prevents igniting the solvent. Single and multiple gun receivers are available for specific spray gun models. Also offered are paint hose quick-connector receivers, made in various capacities for keeping hose ends in solvent to prevent paint hardening at this point during color changes. Made by **Protectoseal Co.**, 1966 S. Western Ave., Chicago 8, Ill.

▲ For more details circle NED-514 C7 on enclosed inquiry slip ▲

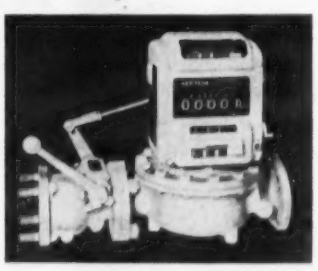
TENSION CONTROL
for winding and unwinding uses



Uniform, consistent and reproducible tension is afforded on winding and unwinding operations by this tension control system, usable with any air-operated clutch or brake equipped equipment. Web of material passes over a load sensing roll which is supported on one end by a journal mounted on a measure-control transmitter. Tension load span is 0 to 2000 lb, accurate within a fraction of a pound. Control panel can be mounted at any convenient location. Made by **Pneumatic Applications Co.**, 80 Meadow Plains Rd., Simsbury, Conn.

▲ For more details circle NED-515 C7 on enclosed inquiry slip ▲

BATCHING METER
operates automatically



Liquid batching is facilitated with this Repeating Auto-Stop meter. It is equipped with a "memory" to deliver the same quantity of liquid each time the valve is opened. It shuts off automatically when the preset quantity is delivered. Quantity setting can be changed by simply pressing the Auto-Stop buttons on the register. Flow can be stopped instantly by pressing the emergency button. Totalizer numerals on the register provide for inventory control, checking daily production and allocating material costs. Available sizes are 1, 1½, 2 and 3 in. Registers are available for conversion of existing Neptune meters. Made by **Neptune Meter Co.**, 19 W. 50th St., New York 20, N. Y.

▲ For more details circle NED-516 C7 on enclosed inquiry slip ▲

BELT CONVEYOR
in cleated or steel mesh belt types

A wide range of conventional as well as problem materials is handled by two models of this Universal conveyor. Model 600 ZA has a self-cleated rubberized belt for conveying bulk and packaged materials including sand, vegetables, small parts, ceramics and cartons. The steel mesh model 600 ZM handles castings, scrap metal, brick and small parts. Design permits coincidental washing, sifting, screening and cleaning operations to be performed. Widths are 6 and 12 in. Standard speed is 135 fpm, but this can be changed by use of different pulleys. Made by **American Planter Co.**, 300 Planter Rd., Burr Oak, Mich.

▲ For more details circle NED-517 C7 on enclosed inquiry slip ▲

CARBON MET

A SPECIFIC CLEANING REPLACEMENT FOR CARBON TETRACHLORIDE

A HALOGENATED AROMATIC HYDROCARBON

A superior metal dry cleaning solvent and degreaser for all types of electric motors, instruments, electronic equipment. Sold in Ready-To-Use "Handy Kit," containing Patented dip and drier basket and larger sizes.

A Lower Toxicity Solvent
- Quick Cutting solvent against stubborn dirt and grease.
- Non-Explosive . . . Safe . . . Comfortable to work with.
- Non-Corrosive to metals. Fast, clean evaporation.
- Non-Ionic . . . Hi-Dielectric . . . a specific for cleaning electrical components.

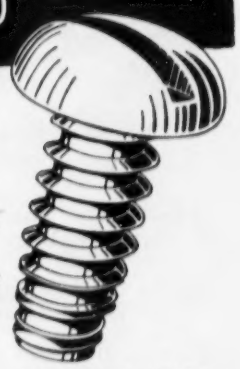
MUCH FASTER CUTTING THAN "CARBON TET" CAUSES NO RUSTING . . . LEAVES NO FILM

IMMEDIATE DELIVERY
1 Pint or a Tank Car!

CURRAN CORP.
Mfg. Chemists
LAWRENCE, MASS.
120 SOUTH CANAL ST.

▲ For more details circle NED-518 C7 on enclosed inquiry slip ▲

Proved way to cut assembly costs
P-K® hardened
Self-Tapping Screws



- Eliminate tapping, soldering, riveting, bolting
- Stay tight under vibration
- dependable, uniform quality

Save time and money in fastening metals—plastics—laminates

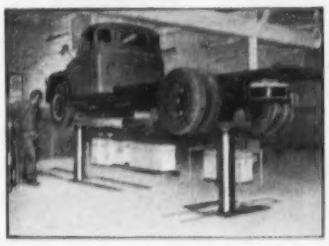
Type Z Slotted or Phillips

IF IT'S P-K IT'S O.K.

PARKER-KALON®
THE ORIGINAL SELF-TAPPING SCREWS
Parker-Kalon Division • General American Transportation Corporation • Clifton, New Jersey

▲ For more details circle NED-519 C7 on enclosed inquiry slip ▲

YOU GET 3-IN-1 WITH A
GLOBE "SLR" 2-POST HEAVY-DUTY MODEL HOIST



Long rail post alone lifts cars on short wheelbase trucks

Saddle post used for front-end service

Heavy, long wheel base trucks accommodated on 2-post superstructure.

. . . MOST VERSATILE HOIST YOU CAN OWN

Globe SLR 2-Post Hoists are designed especially for garages and fleet shops servicing trucks, commercial vehicles, and cars. Each post can be operated independently. Free-wheel construction provides more underbody working space, speeds repair jobs.

Cylinders can be located to provide for wheelbases from 100" to 240". Installation is either flush with floor or recessed. Lifting capacity is 18,000, 27,000, or 40,000 pounds depending on model.

Write today for complete information on how Globe Hoists give you more for your money.

GLOBE TRUCK HOISTS

GLOBE HOIST COMPANY
East Mermaid Lane at Queen Street
Philadelphia 18, Penna.

▲ For more details circle NED-520 C7 on enclosed inquiry slip ▲

SAVE METAL and WORK
In Metalworking Plants

RELIANCE
Snap Rings...

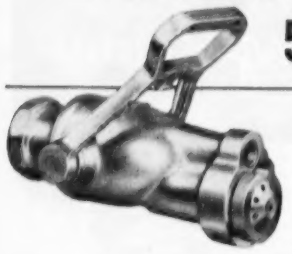
Available in Many Section Sizes And Various Gap Designs

Send for FREE ENGINEERING BULLETIN 55

RELIANCE DIVISION
EATON MANUFACTURING COMPANY
509 CHARLES AVENUE MASSILLON, OHIO
SALES OFFICES: NEW YORK CLEVELAND DETROIT CHICAGO ST. LOUIS SAN FRANCISCO MONTREAL

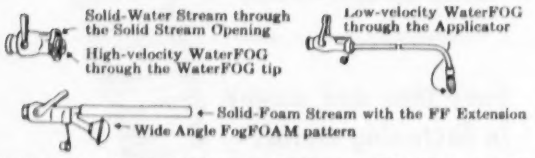
For more details circle NED-521 C7 on enclosed inquiry slip

ROCKWOOD SG-60 WaterFOG nozzle is 5 nozzles in 1



The lightweight Rockwood SG-60 WaterFOG Nozzle *eliminates "special" or single-purpose nozzles!* It actually does the work of five nozzles to put out fires faster, safer and more economically.

HERE'S WHAT WE MEAN:

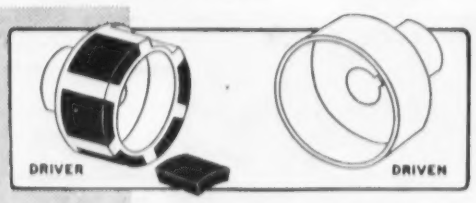


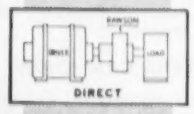
FF Extension Unit. Discharges Rockwood FOAM in a solid stream or as FogFOAM. *Bayonet Piercing Applicator.* Has a hardened steel cutting tool attached to tip, for piercing through partitions, into interiors, etc. Discharges low-velocity WaterFOG. *Long Extension Applicator.* Discharges low-velocity WaterFOG in an umbrella pattern, smothering fire without causing turbulence to flammable liquids. Write for complete, illustrated information to Rockwood Sprinkler Company, 1650 Harlow Street, Worcester 5, Massachusetts.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses

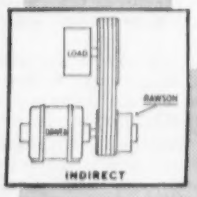
For more details circle NED-522 C7 on enclosed inquiry slip

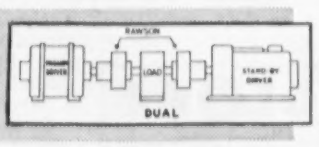
RAWSON® AUTOMATIC CENTRIFUGAL CLUTCH





Smooth controlled torque build-up through cushioned engagement . . . . Friction free idling speeds as desired up to predetermined engagement r.p.m. . . . . Standard applications to 1000 h.p.

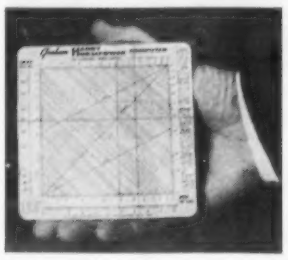




RAWSON COUPLINGS
O. S. WALKER COMPANY, INC.
200 Rockdale St. • Worcester, Mass.

For more details circle NED-523 C7 on enclosed inquiry slip

COMPUTER
solves formulas with two variables



In addition to ordinary slide rule computations, this computer will help solve any formula involving two variables, raised to any power or root, and a constant. Typical, would be a problem on tank capacity in gallons. Special vertical scale for diameter at left would have marking on each side and would include the diameter square and the constant. Standard horizontal scale at bottom would set the length. Capacity would be read on the diagonal. Computer and booklet "Fascination in Numbers" will be sent to engineers requesting them on business letterhead. Offered by **Graham Transmissions Inc.**, Dept. NED, Menomonee Falls, Wis.

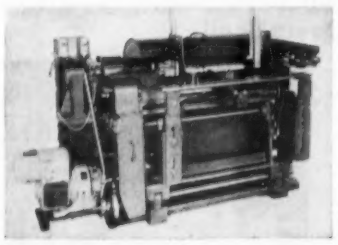
For more details circle NED-524 C7 on enclosed inquiry slip

PLASTIC PIPE FITTING
assures leakproof cemented joints

Plastic layer, only a few thousandths of an inch thick, makes the inner half of this Uscoweld plastic pipe fitting slightly smaller than outside diameter of pipe it is used to join. Light coat of solvent base cement softens this layer so that pipe can be pushed snugly into place. Weld is strong enough within seconds for ordinary handling, and as strong as the pipe itself in about 2 hours. Made of styrene-acrylonitrile blend, fitting is offered for ½ to 2-in. diameter plastic pipe. Made by **United States Rubber Co.**, Dept. NED, 1230 Sixth Ave., New York 20, N. Y.

For more details circle NED-525 C7 on enclosed inquiry slip

WOOD SHAPING-TURNING LATHE
makes round, square, other shapes



Stock up to 24 in. long can be turned into round, square, octagon and hexagonal or polygonal shapes for furniture legs, pedestals, mallets, rollers, by this wood shaping and turning lathe. Finished parts require little sanding. As machine requires only feeding of stock, one operator can run three machines turning out up to 1500 pieces per hour. Arrangement of cams attached to the work spindle revolving against a concentric faced shoe forms the above shapes. Cam aligning mechanism is automatic. Machine has a Vari-Drive motor which permits in-operation speed changes from 60 to 500 pieces per hour. Made by **I. H. Bradley & Sons**, 270 Fifth St., Bridgeport 7, Conn.

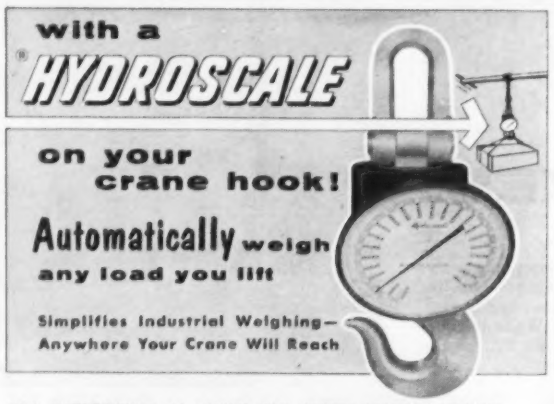
For more details circle NED-526 C7 on enclosed inquiry slip

COMPRESSOR
delivers over 5 cfm at 40 psi

Automatic unloading control is integral with compressor head in this tamperproof compressor so that no adjustments are needed. Only controls are the on-off switch, which includes thermal cut-out, and manual unloader control. The model 505 has a kick bar which prevents the 160-lb compressor from being overturned and which acts as cable and hose storage rack. It delivers over 5 cfm at 40 psi and has ¾-hp motor, single-cylinder direct-drive compressor, 10-in. rubber tired wheels, spring foot, removable draw bar, pulsation chamber with drain cock, 25 ft of rubber-covered cable, large intake filter and muffler. Made by **Eclipse Air Brush Co.**, 421 Park Ave., Newark 7, N. J.

For more details circle NED-527 C7 on enclosed inquiry slip

with a HYDROSCALE on your crane hook!



Automatically weigh any load you lift

Simplifies Industrial Weighing— Anywhere Your Crane Will Reach

ALL WEIGHING IS DONE ON YOUR CRANE HOOK
ENGINEERED AND BUILT FOR LONG SERVICE-LIFE
THERE ARE 110 MODELS IN THE COMPLETE LINE
TARE ADJUSTING KNOBS FOR NET LOAD READING
EASY-TO-READ DIALS AVAILABLE IN 3 SIZES

HYDROSCALES guaranteed
They are guaranteed to be free of defects in workmanship and materials, and to be accurate to ½ of 1% of the maximum dial capacity—

HERE ARE SOME TYPICAL WEIGHING APPLICATIONS
Just a few of the many applications include — loading, unloading, check weighing, batching, foundry charging, and protecting your equipment from overloading.

HYDROWAY SCALES, INC.
31288 Stephenson Highway • Royal Oak, Michigan
"The world's largest producer of crane scales"

For more details circle NED-528 C7 on enclosed inquiry slip

New Parker Power Tube Flarer for fast, easy production flaring

- Electric-motor driven machine produces perfect, concentric, smooth-surfaced flares even with *stainless steel* tubing. Also handles copper, aluminum, and steel. For all sizes from ⅛" through 2", OD.
- Standard (AN, JIC, SAE Hydraulic) 37 degree flares for use with Triple-lok (or AN) tube fittings.
- Readily-interchangeable heads and accessory attachments for squaring-burring and beading of tubing.
- Available with air-operated tube clamp on special order.
- Full details, Parker Catalog No. 1145A12.

Parker
Hydraulic and fluid system components

Order from your Parker Distributor — or Tube and Hose Fittings Division, Section 426-Q, The Parker Appliance Co., 17325 Euclid Ave., Cleveland 12, Ohio

For more details circle NED-529 C7 on enclosed inquiry slip

Free FILTER Guide

New Filtration Bulletin describes 6 major automatic filtering processes for industrial application

2 to 1000 G.P.M. capacities are listed for coolants, cutting oils, paint spray booth water, wire drawing oils, quenching oils, edible oils and juices, optical blank grinding coolants, solvents and cleaners, aluminum foil rolling oils, air conditioning wash water, atomic and nuclear applications.

Delpark *Write today for your copy of Filtration for Industry* —First in Filtration Advancement

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

For more details circle NED-530 C7 on enclosed inquiry slip

DOR-TITE

DA PRODUCTS SINCE 1919

for Sealing! Cushioning! Insulating! Silencing!

Here's the soft, resilient sponge rubber stripping that solves countless problems . . . around windows, doors, etc. DOR-TITE installs fast thanks to factory-applied *extra tacky* adhesive. DOR-TITE stays put . . . never stretches . . . never creeps. Available in all popular sizes.

SPONGE RUBBER for • Pads • Gaskets • Cushions • Mountings

Available in all popular sizes

FREE SAMPLES

Write on your letterhead for samples of DOR-TITE and/or SPONGE RUBBER Dept NE-3

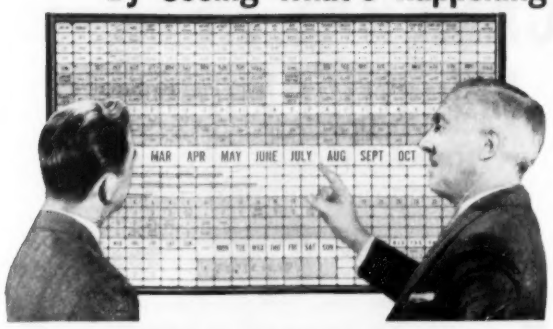
Installs in seconds!

DURKEE ATWOOD V-BELTS

DURKEE-ATWOOD CO. Minneapolis 13, Minn.

For more details circle NED-531 C7 on enclosed inquiry slip

You Get Things Done Better By Seeing What's Happening



BOARDMASTER VISUAL CONTROL

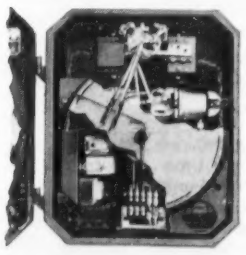
- ★ Gives Graphic Picture of Your Operations in Color.
- ★ Facts at a Glance—Saves Time and Prevents Errors.
- ★ A Simple, Flexible tool—Easily Adapted to Your Needs.
- ★ Easy to Use. Type or Write on Cards, Snap on Board.
- ★ Ideal for Production, Scheduling, Sales, Inventory, Etc.
- ★ Compact, Attractive. Made of Metal. Over 100,000 in Use.

Complete Price $49.50 Including Cards

FREE 24-Page ILLUSTRATED BOOKLET N-100 Without Obligation

GRAPHIC SYSTEMS, 55 West 42nd St., New York 36, N. Y.

For more details circle NED-532 C7 on enclosed inquiry slip



NEW ELECTRONIC CONTACT CONTROLLER

A completely new concept in control mechanism, Taylor's New Electronic Contact Controller gives rugged, positive contact action for two-position action type controls. It's designed for:

1. Accurate, dependable electrical circuit operation.
2. On-off applications with small process lags, slow reaction rates, small and infrequent load changes.
3. Use on most types of measuring systems—temperature, pressure, liquid level, flow, humidity, etc.
4. Indicating, recording and/or controlling. Extremely versatile, Taylor's new Electronic Contact Controller works in place of or as supplement to pneumatic control. Ask your Taylor Field Engineer or write for **Bulletin 98265.** Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada.

Taylor Instruments MEAN ACCURACY FIRST

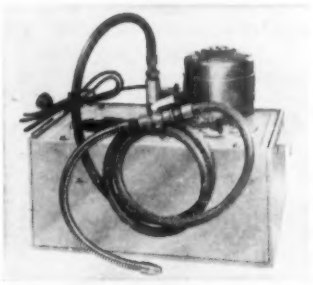
For more details circle NED-533 C7 on enclosed inquiry slip

WIRE CONTAINER in up to 6000-lb capacities

Heavy duty model 400 Wire-Tainer can be used to handle heavy castings, forgings and stampings in production, warehousing or in-transit operations. Containers are made in various sizes with capacities up to 6000 lb. They can be stacked four high, loaded to capacity. Units with access gates, as shown, are available. Made by **Springport Steel Products Co.,** 120 Willow St., Springport, Mich.

For more details circle NED-534 C7 on enclosed inquiry slip

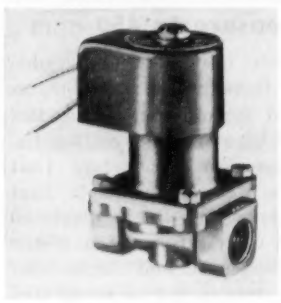
COOLANT PUMP has bronze housing and impeller



All-bronze pump housing, impeller and shafts assure maximum life for corrosion-resistant model CTU-115 coolant pump. Unit will pump abrasive-laden liquids without harm since there are no bearings or metal-to-metal contact. It will deliver coolants, cutting oils, soluble compounds and many liquids to milling machines, lathes, cutoff machines, belt sanders or grinders. Pump is offered with 6 ft of flexible hose, a 17-in. flexible nozzle with shut-off, 8 ft of rubbr cord and standard 5-gallon tank. Made by **Sutton Mfg. Corp.,** Dept. NED, 112 W. Wilson Ave., Norfolk, Va.

For more details circle NED-535 C7 on enclosed inquiry slip

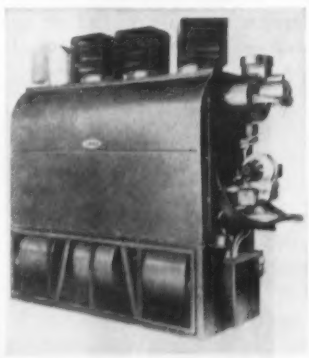
STEAM SOLENOID VALVE in 3/8 and 1/2-in. IPS



Two-way bulletin 8222A steam solenoid valve can be used for automatic control of flow of steam, hot fluids or gases up to 400° F. Used in heat exchangers, industrial cleaning machines, sterilizers and dry cleaning machines, valve employs Teflon disks to assure tight shut-off. It is of packless construction, and internal operating parts are designed to last the life of the valve. Offered in 3/8 and 1/2-in. IPS, the internal pilot-oprated valves have forged brass bodies and brass bar stock bonnets. Glass silicone insulated, high temperature coils are rated 11.5 w ac, 15 va holding and 32 va inrush. Made by **Automatic Switch Co.,** Florham Park, N. J.

For more details circle NED-536 C7 on enclosed inquiry slip

CENTRAL HEATING PLANT direct-fired unit is made in 300,000 to 2 million Btu sizes



No boiler is required for this complete, easy-to-install central heating plant for warehouses, factories, institutions, and other large-area buildings. Only fuel and electrical connections have to be made and the unit vented for operation. The direct-fired heat diffuser is available in any of 10 sizes burning either gas or oil and delivering from 300,000 to 2 million Btu.

Choice of installation method includes wall, ceiling suspension and floor mounting. Ducts can be used to carry heat to areas where direct circulation from diffuser outlets would not be adequate. Efficiency is such that at least 80 per cent of the consumed fuel is converted into usable heat. Made by **Carrier Corp.,** 300-A S. Geddes St., Syracuse 1, N. Y.

For more details circle NED-537 C7 on enclosed inquiry slip

Sarkes Tarzian, manufacturers of television and radio equipment, use Art Wire and Stamping Company's special upset pins because their uniformly high quality eliminates manufacturing problems. They say: "Through the use of this part we have simplified assembly and improved performance."

We supply upset pins of any workable metal or alloy in diameters from .010 to .090. Thickness of upset flange on head from .010 on fine wire to .062 on heavy wire. Flanges precision positioned to your specifications.

Precision manufacture on modern high speed machines results in uniformly high quality, lowest production costs.

Why not let us quote on your next order? Send a blueprint or sample for a prompt estimate.

ART WIRE AND STAMPING CO.

15 Boyden Place, Newark, New Jersey

For more details circle NED-538 C7 on enclosed inquiry slip

One Hand Tool Installs them All!

and they're

COLOR-KEYED for SPEED

A COMPLETE NEW LINE OF T&B METHOD COMPRESSION CONNECTORS—Color-Keyed for use WITH THE NEW LIGHTWEIGHT TBM5 COMPRESSION TOOL

The full range of wire sizes from No. 8 AWG to 250 MCM is covered by the new *Color-Keyed* Connectors—in all styles, for installation on copper conductors.

The new *Color-Keyed* TBM5 Compression Tool is easy to use. It makes permanent, high conductive joints every time.

T&B Method, *Color-Keyed*, can save you time and money—ask your T&B Distributor for a demonstration.

Sold only under The T&B PLAN of Wholesaler Distribution.

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INCORPORATED

24 Butler Street . Elizabeth 1, New Jersey

THOMAS & BETTS LTD. Montreal, P.Q., Canada

T&B ENGINEERED

MANUFACTURERS OF FINE ELECTRICAL FITTINGS SINCE 1898

For more details circle NED-539 C7 on enclosed inquiry slip

FOR MAXIMUM CAPACITY IN MINIMUM SPACE . . .

THE VERSA MANIFOLD MOUNT VALVE

The Versa Manifold Valve has been especially designed for use where space is at a premium.

All piping can be installed, connected to manifold plate and even purged before installation of the valve itself. The valve is then simply bolted into place on the manifold plate. The valve proper, being independent of the piping, can be easily removed for service or replacement without disconnecting piping or disassembling the valve.

Versa Control Valves are available with any type of actuating device in sizes from ⅛" to 1" NPT, in 2-, 3-, 4-, and 5-way type, and for pressures from partial vacuum to 500 PSIG.

All Versa Valves are triple pressure and functionally tested under water for guaranteed leakproofness.

Over 110,000 Variations . . . Ready for Immediate Delivery!

VERSA

VERSA PRODUCTS COMPANY INC.
249-A SCHOLES STREET
BROOKLYN 6, N. Y.

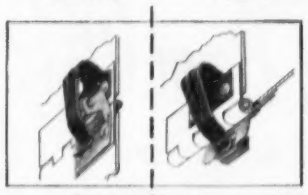
Write today for your free copy of Versa's Catalog #14.

For more details circle NED-540 C7 on enclosed inquiry slip

HOLD HINGED DOORS

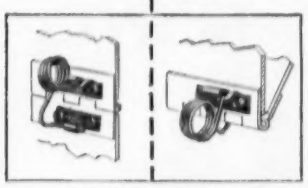
TIGHTLY CLOSED | FIRMLY OPEN

With SOUTHCO



Spring and cam type | New smooth-acting brass roller delivers long-lasting, trouble-free service.

Door Retaining Springs, doors pull open to stay open, leaving two hands free for work! Just a snap, and they stay shut, eliminating rattle and dirt.



Coil spring type | Rugged heavy-duty model has 10 lb. maximum moment. Requires minimum inside space.

Springs to fit varying door sizes and tensions. Easy installation. Corrosion resisting for long life.

Write for descriptive data now. Southco Division, South Chester Corporation, 243 Industrial Highway, Lester, Pa.

SOUTHCO FASTENERS LION

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For more details circle NED-541 C7 on enclosed inquiry slip

Cut Maintenance $600 yearly per unit with WORLD Hand Dryers

Best By Test! Factory Guaranteed!

THOUGHTFUL BUYERS USE WORLD!
Marshall Field & Co.
Northwestern University
Chrysler Corp.
Union Pacific Railroad
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Frick Building
U. S. Army
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Each high speed WORLD Hand Dryer can save up to $600 per year on paper and maintenance . . . dry hands fast as towels . . . keep washroom clean and sanitary.

Prove it to yourself under our FREE trial offer! Full details on request.

WORLD

WORLD DRYER CORPORATION
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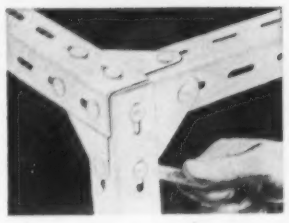
Gentlemen: Without obligation send me copies of letters from users, also folder of facts including cost-saving figures and full details on your FREE-TRIAL offer.

My name _____
Firm name _____
Street _____
City _____ State _____

MAIL THIS COUPON NOW!

For more details circle NED-542 C7 on enclosed inquiry slip

SLOTTED STEEL ANGLE
for benches, shelves, guards, frames



Cold rolled steel with a tensile strength of 32 tons per square inch is used in slotted Handy Angle, for making benches, shelves, switchgear frames, machine guards and dollies. Rust-proofed, lacquered product is supplied with an anchor plate which provides rigidity and eliminates corner bracing. Square-necked bolts with mushroom heads provide smooth, snag-free surfaces. Glazing strip available in both single and double sizes enables glass, wire mesh and hardboard to be used with it for partitions. Packages contain ten 10-ft x 1½ x 1½ x 0.080-in. lengths, 20 anchor plates and 100 bolts, nuts and washers. Angles can be cut to any length. Made by **Lug-All Co.**, Handy Angle Div., 355 Lancaster Ave., Haverford 6, Pa.

For more details circle NED-543 C7 on enclosed inquiry slip

BORING BARS
changing anvil permits altered use

Interchange of only the standard anvil of micro-adjustable boring bars permits transferring from a turning to a threading or facing operation, or from one requiring triangular inserts to another requiring round or square throw-away inserts. Bar, chip breaker clamp and microadjustment remain unchanged. Interchangeable anvils have carbide anvils to support the throw-away inserts. Made by **Wesson Co.**, 1224 Woodward Heights Blvd., Ferndale 20, Mich.

For more details circle NED-544 C7 on enclosed inquiry slip

POSITIVE DISPLACEMENT FLOWMETER
1 to 6 in. sizes measure to 450 gpm

Such hard-to-handle fluids as bunker oils, still bottoms and asphalt can be handled by VAF-Brooks positive displacement flowmeter. Unit operates on principle that quantity of liquid displaced by each stroke of a piston is constant, and the number of strokes can be integrated by a counting mechanism. Meter has four single-acting pistons arranged so that each piston controls the actions of the others. All act as sliding valves. One to 6-in. sizes are capable of up to 450 gpm capacity, temperatures to 660° F and pressures up to 600 psi. Accuracies range within ¼-per cent. Made by **Brooks Rotameter Co.** Dept. OP, Box 432, Lansdale, Pa.

For more details circle NED-545 C7 on enclosed inquiry slip

HEAVY DUTY LADDER
4 to 20-ft high aluminum models

Ten models in line of heavy duty industrial stepladders will support 800 lb placed on the top, front step or back step. Made of aluminum alloys with cast

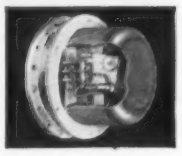
aluminum alloy top section, they have a ribbed and reinforced channel front rail, nonskid ribbed extruded front step and a rectangular drawn tube back rail. All have rubber feet, 12-in. step spacing which provides alternate 6-in. increments for using planks and optional pail rest. Heights from 4 to 20 ft weigh from 14 to 84 lb. Made by **Metallic Ladder Mfg. Corp.**, 6 Sheldon St., Randolph, N. Y.

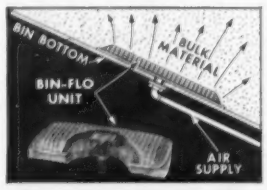
For more details circle NED-546 C7 on enclosed inquiry slip

NEW BIN LEVEL INDICATOR

New ROTO-BIN-DICATOR®
Motor driven paddle-type bin level indicator
For automatic bin level indication or control of bulk materials. Particularly suited to applications on bins subject to pressure or vacuum.
EXPLOSION-PROOF
U. L. listed units available

BIN-DICATOR®
The original diaphragm-type bin level indicator. In successful use for 20 years.





BIN-FLO®
Assures gravity flow of pulverized materials
Bin-Flo Aerator units in bins, chutes, etc., use small volume, low pressure air to restore flow to dry, pulverized materials which tend to pack and bridge in storage.

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

Write for detailed Literature or call
VAlley 2-6952

WE SELL DIRECT • PHONE ORDERS COLLECT

For more details circle NED-547 C7 on enclosed inquiry slip

Wollensak FASTAX CAMERAS are boon to Industrial Engineers

. . . quickly pinpoint design and engineering problems

". . . If you think high speed movie photography is of interest only to businessmen of the Buck Rogers type, think again. It has fascinated some down-to-earth folk at (both) ends of the American economy: Television ad men . . . factory managers . . . engineers.

"Factory managers are using the time machines to find for the first time what is really going on in their plants.

". . . For example Paper Mate Manufacturing Co., Burroughs Corp., Ethyl Corp., General Mills, General Motors, Ford are just a few corporations using high speed photography to stop time . . . freeze motion."

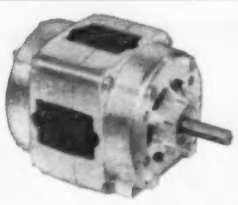
FASTAX cameras are the most widely used high speed motion picture and oscillographic cameras because they are the most versatile . . . have the widest speed ranges . . . offer the most complete line.

WRITE and see how high speed photography can help save engineering time . . . cuts down on development time because it enables your engineers to pinpoint problems more readily . . . helps picture the answer. Wollensak Optical Company, Rochester 21, New York.

WOLLENSAK
OPTICAL COMPANY
ROCHESTER 21, NEW YORK

For more details circle NED-548 C7 on enclosed inquiry slip

MINIATURIZED

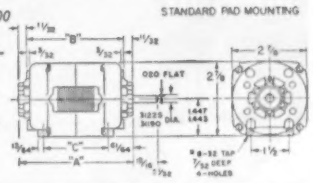


NEW

HOWARD MODEL 9200 INDUCTION MOTOR

Unusual Power in A Small Frame Size

HOWARD MODEL 9200 1/300 to 1/30 h.p. Permanent Split Capacitor, Single Phase, 50/60 Cycle Induction, Torque, Synchronous Type—Also available in two or three phase designs.



Now available from Howard Industries, Inc. is an exclusive Miniaturized Induction motor with all the features of an ultra modern power motor for use in tape recorders, communication equipment, office machines, turn table, movie projectors, air craft, instruments, electronic devices and many more applications.

Howard's Model 9200 has been rated by experienced engineers as the finest small induction motor on the market. Performance ratings of these motors are outstanding, comparable to those of considerably larger frame sizes. For complete details, engineering drawings and samples, write, wire or phone HOWARD today.

HOWARD

Other Howard motors: UNIVERSAL & D.C. 1/200 to ½ h.p. • SHADED POLE 1/2000 to ¼ h.p. • INDUCTION 1/1400 to ⅙ h.p. • SERVO MOTORS • GEAR MOTORS • BLOWERS

HOWARD INDUSTRIES, INC. 1740 State St., Racine, Wisc.

Divisions: Electric Motor Corporation—Cyclohm Motor Corporation—Racine Electric Products

For more details circle NED-549 C7 on enclosed inquiry slip

NOELTING ALL-STEEL Faultless TRUCK LOCK WITH 2 PUSH-PEDALS FOR SAFETY!

No more scuffed shoes from rough cast edges. No more soles torn away from shoe tops. Toe presses down on the Faultless Truck Lock—toe does not lift. Both foot pedals have non-slip treads for complete safety in operation.

Write for literature and specifications

FAULTLESS CASTER CORPORATION
Dept. NE, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

For more details circle NED-550 C7 on enclosed inquiry slip

Master heavy-duty assortment of

hydraulic tools for maintenance!

Press bearings, pull gears, spread die-sets, lift machines, clamp materials

LET hydraulic power do the work when and where you need it! Portable, easy-to-use Porto-Power works faster, safer, easier. Master maintenance kit contains essential rams, pump and 41 job-designed attachments. Call your industrial supply house for complete details.

FREE Blackhawk Catalog H-201 shows new ways to cut maintenance costs! Write Dept. H-1437.

BLACKHAWK®
BLACKHAWK MFG. CO., MILWAUKEE 46, WISCONSIN

For more details circle NED-551 C7 on enclosed inquiry slip

POWER FLOOR SWEEPER
covers up to 126,000 sq ft per hour

Multiple disk reversing clutch, three-speed transmission and drive axle mounted differential, and a heavy chain drive from transmission to differential are features of the Sweepmaster industrial power floor sweeper. It has automotive styling and is powered by a Wisconsin air-cooled 15-hp engine. High volume fan deposits all dust in a heavy duty bag that can be cleaned without removal from the machine. Switches on the steering column actuate both hydraulic dump on the hopper and 7-in. lift of sweeping chamber for sweeping bulky debris. Machine can sweep 126,000 sq ft of open area per hour at 6 mph. Maximum speed is 10 mph. Made by **Wilshire Power Sweeper Co.,** Dept. A-55, 227 Dundee Ave., Elgin, Ill.

For more details circle NED-552 C7 on enclosed inquiry slip

DRAFT INDUCER
assures draft in small buildings

Adequate draft at all times, regardless of wind or weather, is assured by the size 10-D draft inducer, developed for heating plants with capacities up to 4½ gph of oil or 500 cfh of 1000-Btu gas. Unit assures good combustion, eliminates need for tall stacks and can be mounted horizontally or vertically in the breeching. Motor and fan assembly are one unit, easily withdrawn for servicing. The bearings are air cooled and the fan requires no lubrication. Made by **L. J. Wing Mfg. Co.,** 165 Vreeland Mills Rd., Linden, N. J.

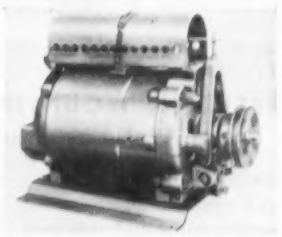
For more details circle NED-553 C7 on enclosed inquiry slip

MULTIPURPOSE GREASE
high stability lithium base type

High and low temperatures, water action, high speed bearing action and long storage are service-affecting conditions which are withstood by Gulfcrown multipurpose grease with lithium base. Its use reduces the number of lubricants required and minimizes errors in application. Grease has high oxidation and mechanical stability, good resistance to washing action of water and flows readily in cold weather. Four consistencies for grease gun or centralized lubrication system application are available. Made by **Gulf Oil Corp.,** 1822 Gulf Bldg., Pittsburgh 30, Pa.

For more details circle NED-554 C7 on enclosed inquiry slip

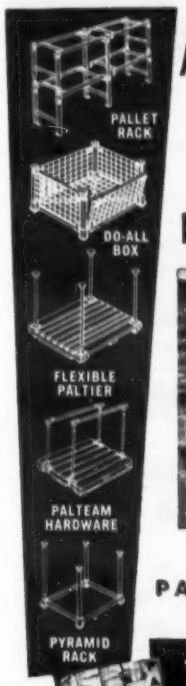
POWER TRANSMITTER
incorporates brake and clutch for fast stop-start machine control



High production machine tools, textile machinery, winding equipment and conveyors can be remotely or automatically controlled in rapid stop-start operation by the type J solenoid operated power transmitter. Forty or more starts per minute are possible when driving machines which have reasonably low inertia. Motor uses a constantly running flywheel with a short-throw clutch actuated by two tandem 115-v, 60-cycle ac solenoids, one solenoid engaging the clutch and the other the brake.

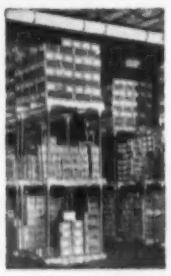
Control is by stop-start pushbutton station or through limit switches, sensing devices, timers or other controls in automatic operation. Totally enclosed, fan cooled unit is available for single-phase, 60-cycle, 115/230-v operation in ¼, ½, ¾ and 1-hp ratings and for two or three-phase, 60-cycle, 208, 220/240 or 550-v operation, with ¼ to 2-hp ratings. Made by **Diehl Mfg. Co.,** 1201 Finderne St., Somerville, N. J.

For more details circle NED-555 C7 on enclosed inquiry slip



A Paltier SYSTEM in your plant

Earns You Money *Everyday!*



1 By reducing the area now required to store your inventory, Paltier EARNS IN RENT MONEY Everyday!

2 By reducing the travel time of your men, they handle more merchandise, Paltier EARNS MONEY In Labor Savings Everyday!

3 By preventing damage in crushing, Paltier EARNS MONEY ORDINARILY LOST Everyday!

There is a PALTIER SYSTEM designed especially for YOU

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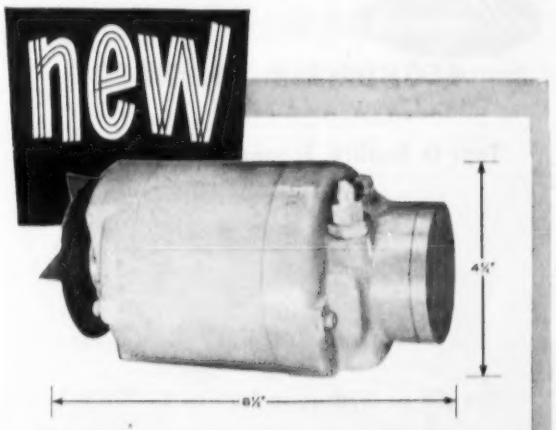
THE PALTIER CORP.
Designers, Engineers and Manufacturers of Engineered Storage Systems
1705 Kentucky Street • Michigan City, Indiana
DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle NED-556 C7 on enclosed inquiry slip

new



POWERMITE

PUMP and MOTOR COMBINATION

- COMPACT
- LIGHTWEIGHT
- ECONOMICAL

This compact, new POWERMITE motor-pump combination, a Tuthill exclusive, was developed to meet the requirements of original equipment manufacturers with unusual space and weight limitations.

Motor and cooling blower have, in effect, been incorporated into the internal gear positive displacement rotary pump. The whole unit takes up no more space than a standard electric motor. A single shaft serves all units of the Powermite—and the elimination of couplings, other parts and labor permit substantial economies for OEM applications.

The pump section contains a built-in strainer, and, if desired, an adjustable relief valve. Powermite can be furnished with cooling blower, as illustrated, or supplied with a shaft extension for driving other accessories.

Powermite can be furnished in a wide variety of pump and motor combinations for use in hydraulic, oil burning, lubricating, and other services involving many different fluids. For example, the model illustrated has a capacity of 18 gph at 300 psi, and is driven by a 1/12 hp motor at a speed of 1750 rpm.

Manufacturers desiring to investigate the advantages of incorporating Powermites into their products are invited to submit detailed specifications. Or, if preferred, a Tuthill representative will call.

TUTHILL PUMP COMPANY
959 East 95th Street, Chicago 19, Ill.
Canadian Affiliate: Ingersoll Machine & Tool Company, Ltd., Ingersoll, Ontario, Canada
PUMPS FOR YOUR PURPOSE

For more details circle NED-557 C7 on enclosed inquiry slip

Hardness Readings in 2 seconds!

Webster PORTABLE **Hardness Testers** FOR NON-FERROUS METALS

TWO LOW-COST MODELS differing in sensitivity for rapidly testing hardness of aluminum, brass, copper, etc. No training required; one hand operation. Hardness readings in 2 seconds anywhere in shop. Can be correlated to standard hardness scales. Quick reading dial. Special anvil design tests all shapes: sheets, extrusions, tubing, strip stock. Capacity ¼". Simple, rugged design, easy maintenance.

MODEL B Direct hardness readings on all aluminum alloys.

MODEL B-75 Direct hardness readings on copper, brass, etc.

Other models available

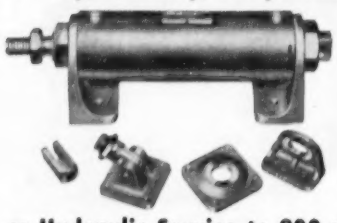
WEBSTER INSTRUMENT INC. DEPT. N, 11856 Mississippi Ave. Los Angeles 25, California.

For more details circle NED-558 C7 on enclosed inquiry slip

Modernair

ECONOMAIR CYLINDERS

Tops in Quality, Economy, Compactness!



For Air or Hydraulic Service to 200 psi

- ★ Compact — feed ring head design eliminates bulky end castings!
- ★ Interchangeable mountings — flange, clevis, L-type
- ★ "O" ring seals throughout
- ★ Available in 1⅛", 1½", 2", 3" and 4" bore sizes, any practical stroke length, cushion or non cushion types

Economair series cylinders offer today's best buy in quality cylinders at truly competitive prices — why pay more and get less? Write today for complete specifications, prices.

Modernair CORPORATION

Dept. F 3, 400 PREDA ST., SAN LEANDRO, CALIF.

Member National Fluid Power Association 23-R

For more details circle NED-559 C7 on enclosed inquiry slip

"FOOLPROOF" TANK WEIGHING WITH EMERY LOAD CELLS

'rolling ball' head

COUNTERACTS OFF-CENTER LOADING

The tank shown above is one of the simplest arrangements of an Emery Weighing System utilizing the new "Rolling Ball" Load Cell. It consists of one Emery Cell to support the front end of the tank and two Emery Ball Pivot Assemblies or some other support such as an "I" beam for the back of the tank.

The hydraulic pressure in the cell actuates an indicator, recorder or controller which is so calibrated that it reads directly the weight of the tank contents.

Note: This arrangement is only one of fifteen discussed in our new Bulletin 561. If you have a tank weighing problem, send for Bulletin 561 today.

THE A. H. EMERY COMPANY

Pine Street • New Canaan, Connecticut

For more details circle NED-560 C7 on enclosed inquiry slip

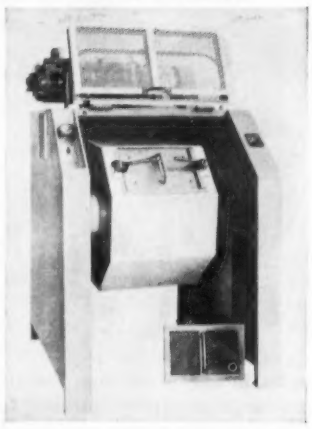
PORTABLE MIXING DEVICE agitates contents of 55-gal drums

Thorough mixing or agitating of liquid mixtures in 55-gallon drums can be done with model A portable drum agitator. Device easily mounts in threaded

bung of drum and consists of ⅓-hp 115-v ac electric motor drive, an aluminum mounting cage and mixing shaft. Mounted on the end of the shaft and half way up are small-diameter mixing paddles. Model B agitator with explosionproof motor is also offered for use with flammable liquid mixtures. Made by **Prenco Products, Inc.,** 511 E. Ten Mile Rd., Hazel Park, Mich.

For more details circle NED-561 C7 on enclosed inquiry slip

FINISHING BARREL variable speed unit holds 1200 lb



Single or double compartment models, with or without neoprene lining, are available in this 22 x 33-in. welded steel finishing barrel. It has a capacity of 1200 lb and operates at speeds from 7 to 30 rpm. Safety features include a poppet type venting valve, guard which shuts off barrel operation when raised and recessed controls. Made by **Abbott Ball Co.,** 1047 New Britain Ave., Hartford 10, Conn.

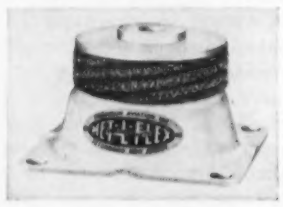
For more details circle NED-562 C7 on enclosed inquiry slip

AUTOMATIC WEIGHING UNIT can be washed if necessary

Weighing mechanism of this model B automatic weighing unit is sealed in cast aluminum enclosure so that unit can be washed to solve a contamination problem. Controls are housed in remote box, and electrical connection is made with watertight connectors. All contact parts are stainless steel. Unit can weigh wide variety of dry products over adjustable range from 1 oz to 10 lb, at speeds up to 30 batches per minute. Single and two-station models are offered, mounted on adjustable pedestal type columns. Weigher can also be used in automatic batching operations involving series of machines. Made by **Glengarry Processes Inc.,** Bay Shore 1, N. Y.

For more details circle NED-563 C7 on enclosed inquiry slip

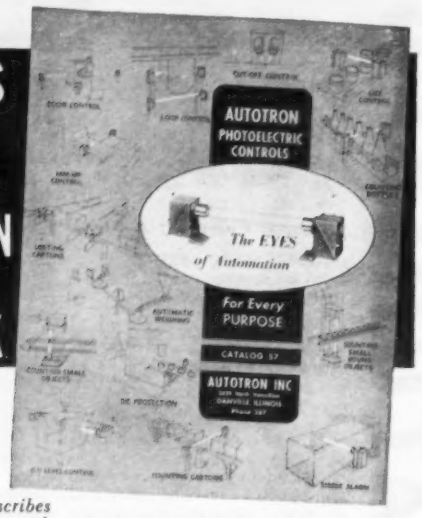
RESILIENT MOUNTINGS control vibration, shock and noise



Machine tools, generators, punch presses, air conditioning and refrigeration equipment and industrial vehicle requiring vibration, shock and noise control can make use of series W164 metal mounting units. They are built of aluminum and load-carrying Met-L-Flex resilient elements capable of attenuating 20 G impact shocks. Capacities from 50 to 1000 lb per unit are available. Performance is unaffected under a wide range of temperatures, regardless of age, exposure to oil, water, solvents and mild acids. Natural frequencies are between 13 and 17 cps, and vibration isolation is provided at disturbing frequencies above about 1250 cpm. Made by **Robinson Aviation Inc.,** 48 Industrial Ave., Teterboro, N. J.

For more details circle NED-564 C7 on enclosed inquiry slip

EYES of AUTOMATION at WORK



New catalog describes normal, high speed, ultra sensitive and impulse actuated photoelectric controls with safety relays, warm up protection, etc. Also photoelectric timing controls, and wide seletcion of light sources with many protective features.

Send for your personal copy

Applications shown include automatic control of conveyors, inspection, carton sorting, smoke and fire detection, die protection, counting, weighing, limit control, tension control, car washing control, piling to exact count, safety control, conveyor traffic and jam-up control, timing control, control of spraying equipment, ramp traffic control and others.

AUTOTRON, INC.

P.O. Box 722 DU Danville, Ill.

For more details circle NED-565 C7 on enclosed inquiry slip

With Lapping Plate

Work clamped to motorized table, mounted on sine plate. Surface grinder application.

FASTER circular precision grinding!

Now with this table and with less effort you assure highest standards of accuracy, flatness, finish and close tolerances. At the same time you eliminate slow and complicated tool setups. You cut grinding time greatly by using only cross feed while the table is rotating at infinite speeds between 40 and 100 RPM.

For example, Vulcan's Rotary Table can be used in connection with a sine plate or angle fixture. The dressing of large expensive external wheels for side grinding is therefore eliminated. If you wish we can provide permanent magnetic chucks designed for use with our table, both 6" and 10" in diameter.

Vulcan's Rotary Table is an air operated, self contained unit, portable between bench or machine. A precision center hole for locating and tapped holes in the table for clamping provides easy setup. Circular surface grinder applications are many and varied — grind flanged studs or bushings — bearing spacers — forming rolls — cutters — convex or concave surfaces — punches or dies (radius or angle).

Lapping? Yes — and in micro inches. For the 6" and 10" table, lapping plates of 12" and 16" are provided. Perfect for lapping valve plates, gages, bearing spacers and for carbide lapping using diamond powder. *Write for circular.*

Major Vulcan Services

Engineering, Processing, Designing and Building....Special Tools.....Dies..... Special Machines....Vulcamatic Transfer Machines....Automation....including the Vulcan Hydraulics that Form, Pierce, Assemble and size. Vulcanaire Jig Grinders ...Motorized Rotary Tables...Plastic Tooling.

Write on your letterhead to

VULCAN TOOL CO.

739 LORAIN AVE. DAYTON 10, OHIO

For more details circle NED-566 C7 on enclosed inquiry slip

light-weight AIRETOOL air-motor GRINDER

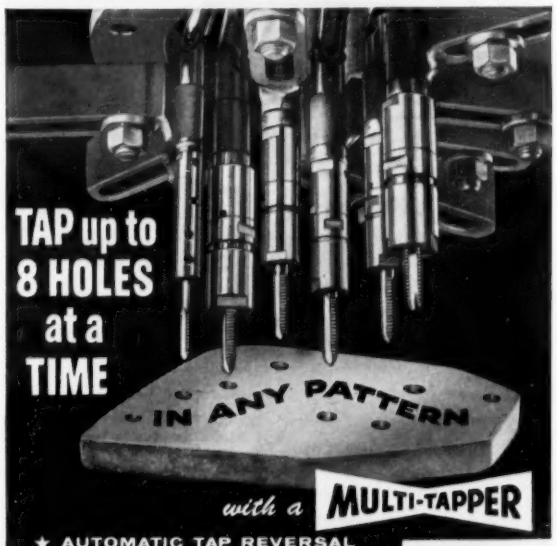
speeds up any portable grinding or snagging operation.

For power . . . speed and economical operation you can't beat this new Airetool air-motor grinder. Handy for cleaning up welds, rough casting, deburring or any other grinding job. Weighs only 12 lbs. for easy handling yet built for rugged service. Controlled speed to 6000 RPM makes any metal removal fast and safe. Abrasive Belt attachment and Right Angle Head model also available. Write for Bulletin No. 61.

AIRETOOL
MANUFACTURING COMPANY
SPRINGFIELD, OHIO

BRANCH OFFICES: New York, Chicago, Tulsa, Philadelphia, Houston, Baton Rouge
REPRESENTATIVES: in principal cities of U.S.A., Canada, Mexico, South America, England, Europe, Puerto Rico, Italy, Japan, Hawaii
EUROPEAN PLANT: Vlaardingen, The Netherlands
CANADIAN PLANT: 37 Spalding Drive, Brantford, Ontario

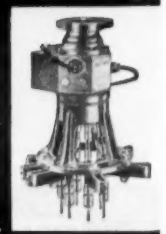
For more details circle NED-567 C7 on enclosed inquiry slip



★ AUTOMATIC TAP REVERSAL
★ FITS ANY DRILL PRESS
★ PRECISE DEPTH CONTROL

MULTI-TAPPER simultaneously handles different tap sizes and pitches—can be set up for automatic or semi-automatic operation. Makes any drill press a production tapping tool.

Want a demonstration in your plant? Write us and we'll arrange it with your nearby Commander Distributor. Ask for your copy of the new Commander Production Tool Catalog.



Commander MFG. CO.
4220 W. KINZIE ST., CHICAGO 24, ILLINOIS

For more details circle NED-568 C7 on enclosed inquiry slip

IMPERIAL *Poly-Flo*
TUBE FITTINGS and Polyethylene Tubing
Offer Huge Savings in Time and Simplify Installation

Fittings and Tubing furnished in 1/4", 5/16" and 3/8" O.D. sizes.

Recommended for working pressures to 125 psi.—1/4" O.D.; 100 psi. — 3/8" O.D.

Poly-Flo Tube Fittings, used with polyethylene or other plastic tubing, offer tremendous savings in time and labor through ease of assembly and installation. Ideal for instrumentation, laboratory equipment, food and beverage plants and many other applications.

Fittings need only be finger tightened. A wrench is never necessary.

Tubing is very flexible, tough and is not affected by most chemicals.

Accessories include tube racks for mounting of tubing, quick-disconnect and other shut-off valves, and convenient make-up kits of tubing and fittings.

Ask for Bulletin No. 3025

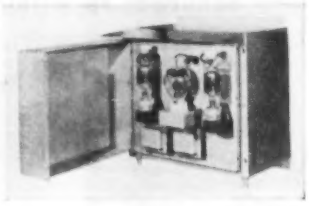
See Your Supply House

IMPERIAL Industry's Most Complete Line of Tube Fittings and Tubing Tools

510 S. Racine Ave., Chicago 7, Ill.

For more details circle NED-569 C7 on enclosed inquiry slip

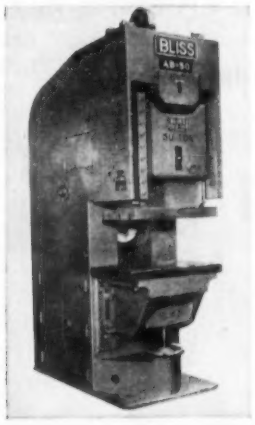
ADJUSTABLE SPEED DRIVE
five sizes from 3/4 to 3 hp



Electronic control of direct current motors from alternating current power over a stepless adjustable speed range is possible with this drive. Five sizes from 3/4 to 3 hp have a 50:1 range, providing any desired speed from 35 to 1750 rpm. Full motor torque is provided over the entire range. Motor speed will not vary over 1/2-per cent of full speed at any setting from no-load to full-load, using a standard 240-v shunt-wound direct current motor. Drive motor is used as a tachometer on the packaged unit which includes all components. Control panel can be separately located. Made by **Weltronic Co.**, 19494 W. Eight Mile Rd., Detroit 19, Mich.

For more details circle NED-570 C7 on enclosed inquiry slip

ADJUSTABLE BED PRESSES
in 50 to 150-ton capacities



Fully enclosed box type frame is featured by line of 50 to 150-ton adjustable bed presses. Units have box-crown, box slide and completely built-in controls. Other features include fast-acting air friction clutch and brake, adjustable rotary limit switch and bronze-bushed bearings at the frame, connections and gibs. The 18 x 24-in. bed of the 50-ton model shown can be raised or lowered 9 in., making possible shut height adjustment from 11 to 20 in. Unwieldy stamping and forming work can thus be accommodated. Made by **E. W. Bliss Co.**, 1376 Raff Rd. S. W., Canton 10, O.

For more details circle NED-571 C7 on enclosed inquiry slip

HYDRAULIC JACK
lifts 100 tons 6 1/8 in.

Model 100B-12 hydraulic lifting jack is rated at 100 tons capacity with lifting height of 6 1/8 in. Low in height, jack is practical for use in erection of heavy equipment, machinery moving and bridge building. By actuating both high-speed and high-lift plungers, operator can quickly bring ram in contact with load. Dual release valves in base can be operated from either side. Base is drilled and tapped for optional pressure gage. Made by **Western Railroad Supply Co.**, 2423 S. Ashland Ave., Chicago 8, Ill.

For more details circle NED-572 C7 on enclosed inquiry slip

ELECTRIC FURNACES
heat ranges up to 2800° F

Line of high temperature electric furnaces for research, quality control and small scale production incorporates controls to meet any requirement from manual operation to complex anticipatory systems using feedback principles. Six models range in firing chamber size from 7 x 7 x 9 in. up to 36 x 36 x 40 in. Silicon carbide heating elements provide up to 2800° F heat, and special doors prevent heat loss, yet permit free access to chamber. All models have an external blower connected to duct system to accelerate cooling. Small furnaces are power rated at 220 v single-phase ac. Ratings of 440 v ac, three-phase are also available. Made by **Harrop Ceramic Service Co.**, Harrop Electric Furnace Div., Dept. D, 3470 E. Fifth Ave., Columbus 19, O.

For more details circle NED-573 C7 on enclosed inquiry slip

where can you use this simple fastener?

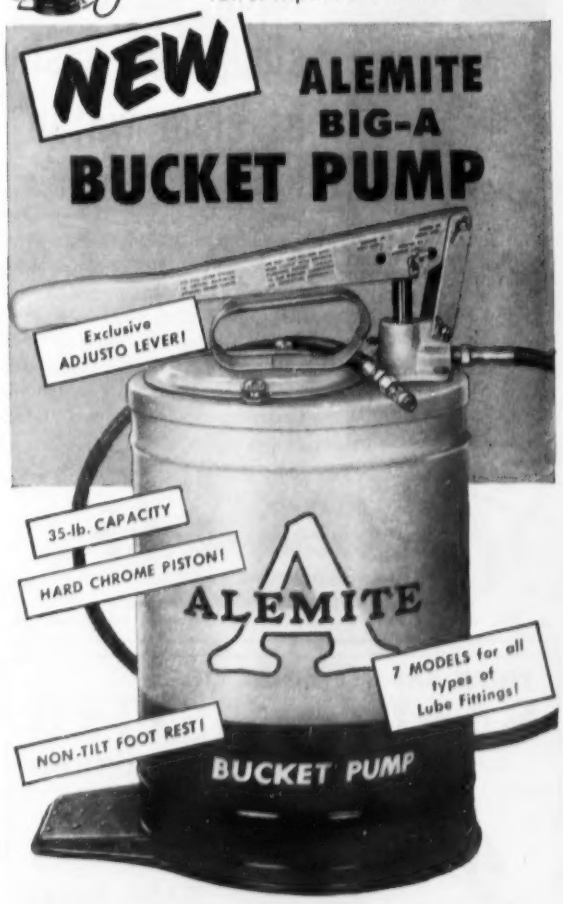
If you use locating dowels, hinge pins, rivets, set screws—or straight, knurled, tapered or cotter type pins—consider ROLLPIN® to reduce your costs. This modern fastener drives easily into standard drilled holes, compressing as driven to provide a precise fit without precision reaming. Its spring action locks it in place—regardless of impact loading, stress reversals or severe vibration. No threading, peening or precision drilling needed. Can be removed and reused in the same hole. For design information, write Elastic Stop Nut Corporation, 2330 Vauxhall Road, Union, N. J., Dept. R43-337

ROLLPIN TRADEMARK

ELASTIC STOP NUT CORPORATION OF AMERICA
2330 Vauxhall Road, Union, N. J.

For more details circle NED-574 C7 on enclosed inquiry slip

LUBRICATES
Hundreds of Bearings
with less refills . . .
fewer trips to the oil room!



HANDLES EITHER OIL OR GREASE!

ADJUSTO LEVER can be adjusted to three positions for—
- Light or heavy lubricants.
- Cold weather.
- Pressures from 2,500 to 5,000 lbs.
- Maximum ease of operation.

EASIEST TO CARRY—Oval shape prevents bucket from bumping leg!

EASIEST TO FILL—Rugged cover is gasket-sealed . . . opens in a jiffy for fast filling!

EASIEST TO SERVICE—One wrench disassembles entire unit!

Write for free catalog today!

STEWART SW WARNER

ALEMITE
Dept. L-37, 1850 Diversey Parkway
Chicago 14, Illinois

For more details circle NED-575 C7 on enclosed inquiry slip

Here's Just 3 Reasons Why So Many Welders Have Switched

- Wrap around Glass Fibre Tip Insulation—30% *more* heat resistance than any other make!
- Brilliant Red Tips and Trigger—Bright Yellow Handle—all Glass Fibre, an outstanding Safety Feature!
- Body completely insulated—no bare spots!

HI-AMP® ELECTRODE HOLDERS are the most economical to buy and maintain too!

Just ask any Welding Supply Dealer anywhere for PROOF of the above statements.

Will see you at A. W. S. in Philadelphia April 9-11, our Booth 107.

LENCO, INC.
(Formerly Wagner Mfg. Co. Inc.)
JACKSON . . . . . MISSOURI

Weld with HI-AMP

For more details circle NED-576 C7 on enclosed inquiry slip

PUMP...

thick, viscous sludge as easily as clear water

You can do it with a Schramm Sump Pump—operated from any air source. Schramm units remove water from flooded cellars, clean raw sewage tanks, at the rate of 400 gpm @ 10-ft head—340 gpm @ 20-ft head—280 gpm @ 30-ft head. Iron or bronze bodies to suit service. Ask local dealer for demonstration or write for free Catalog, SP-56.

Schramm, Inc.
MANUFACTURERS OF AIR COMPRESSORS
700 North Garfield Ave. • West Chester, Pa.

For more details circle NED-577 C7 on enclosed inquiry slip

THERE ARE ALL KINDS OF
SAND BLASTING
CONDITIONS

Pulmosan

NO. 30 SAND BLAST HOOD

PROTECTS UNDER MODERATE BLASTING CONDITIONS AT MINIMUM COST

Lightweight, comfortable, fibre head-frame, adjustable & replaceable hammock assembly. Available with wire screen window or laminated glass with wire screen shield.

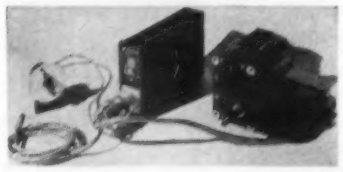
PULMOSAN STOPS Accidents

Pulmosan
SAFETY EQUIPMENT CORPORATION
644 Pacific Street, Brooklyn 17, N. Y., STerling 9-0200
1007 Washington Ave., St. Louis, Mo., CHestnut 1-9393

Write for further data and prices . . . request catalog describing complete line of Sandblast Hoods (air supply included) for every blasting condition.

For more details circle NED-578 C7 on enclosed inquiry slip

REMOTE POSITIONER
high torque output unit is accurate to within ½-degree

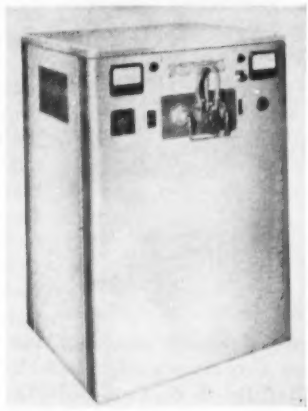


High response and simplicity of electrical servos are combined with high torque output in the Electrolink remote positioner for industrial applications. The 16-lb device operates on standard 60-cycle power, reaches maximum speed in 1/50-second and is accurate within ½-degree.

Three basic components are the data link which converts manually positioned input into error voltage; an amplifier, used to process signals from data link and a velocity signal from the servo drive; and the servo drive which incorporates the integral generator and provides power output to the load. A magnetic power clutch isolates the inertia of the servo's rotating components from the driven load, with consequent high torque-to-inertia ratio. Potential applications include material handling, processing, packaging, testing and automation. Made by **Lear, Inc.**, Dept. 80, 110 Ionia Ave. N.W., Grand Rapids 2, Mich.

For more details circle NED-579 C7 on enclosed inquiry slip

INDUCTION HEATERS
for soldering, brazing, annealing

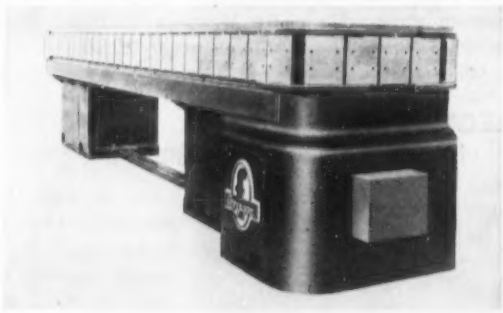


Two floor - mounted 3-kw induction heaters added to Reevelec line are designed for soldering, brazing, hardening, annealing and other production operations. Both model L4E for ferrous metals and model L6E for nonferrous metals have a built-in output transformer for matching a variety of load shapes and sizes. Units also have variable power output control from 3 to ½ kw; automatic recycling heat cycle timer with wide choice of ranges; and circuit breaker protection of both line and high voltage circuits. Outlet is provided for interconnection of remote switches, turntables or other fixture interlocks. Coil and transformer circuits are water cooled, while entire unit is forced air cooled. Heaters comply with FCC regulations. Made by **Reeve Electronics, Inc.**, 621 Lake St., Chicago 6, Ill.

For more details circle NED-580 C7 on enclosed inquiry slip

TRANSFER MACHINE BASES
redesigned for wider use and easier maintenance

Range of applications has been broadened and maintenance simplified by redesign of Trans-O-Mator straight line transfer machines for automatic ma-



chining and assembly. Machines now have 6, 8, 12, 16 or 24-in. strokes with choice of two types of carriers in various sizes. Standard lengths are 10, 14 and 18 ft. Carrier chain tension can be adjusted by screw take-up, or by spring mounted mechanism that compensates for chain stretching.

Power section, composed of 2-hp gearmotor, electric clutch-brake combination and cam indexing mechanism, is mounted as single unit and is easily removed. Control panel, with electrical interlock between indexing and tooling power supply, allows either adjustable timer controlled cycle or sequential operation of tooling and transfer movement. Ferguson roller gear drive indexing mechanism is rated for 8000 hours precision operation, but can be used 20,000 hours without maintenance. Made by **Ferguson Machine Corp.** Roller Gear Div., Dept. 101, Box 5841, St. Louis 21, Mo.

For more details circle NED-581 C7 on enclosed inquiry slip

The Spray Gun INDUSTRY PREFERS

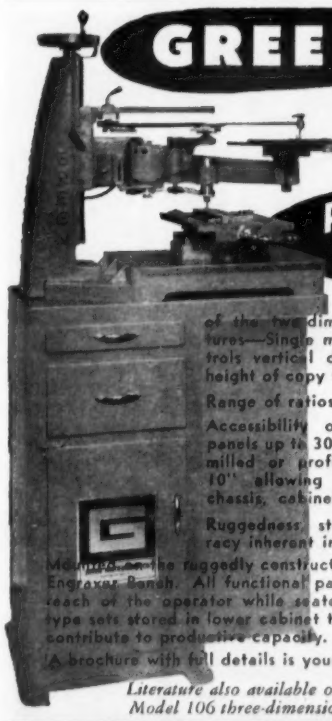
Model P-JGA-502
Features the toughest gun body made.

The DeVilbiss P-JGA spray gun is a high speed, large capacity, production-type gun of exceptionally compact design. Its light weight, comfortable balance and easy action minimize fatigue. Has extra-capacity to handle even the heaviest spraying requirements. Sprays any finishing material. Can be fitted with various nozzles to produce a wide variety of spray patterns for regular and special uses. Write for full details.

DEVILBISS
THE DEVILBISS COMPANY
Toledo, Ohio
Santa Clara, Calif. • Barrie, Ontario • London, England

For more details circle NED-582 C7 on enclosed inquiry slip

GREEN



Model D-2 Pantograph Engraver

Unique design of the two dimensional Model D-2 features—Single micrometer adjustment controls vertical depth of cut, and adjusts height of copy table and pantograph.

Range of ratios from 2 to 1 to infinity!

Accessibility on three sides permitting panels up to 30" diameter to be engraved, milled or profiled. Vertical range over 10" allowing operations on complete chassis, cabinets or other bulky objects.

Ruggedness, stability and precise accuracy inherent in construction.

Mounted on the ruggedly constructed heavy duty steel Green Engraver Bench. All functional parts are conveniently within reach of the operator while seated. Accessibility of master type sets stored in lower cabinet trays, tools and accessories contribute to productive capacity.

A brochure with full details is yours upon request.

Literature also available on the smaller Model 106 three-dimensional engraver.

GREEN INSTRUMENT COMPANY
375 Putnam Ave., Cambridge, Mass.

For more details circle NED-583 C7 on enclosed inquiry slip

SP AIR and HYDRAULIC ROTATING CYLINDERS

Balanced for High RPM

PATENT PENDING

Original equipment on famous machine tools, S-P Rotating Cylinders are adaptable to many other machines. Bore sizes for air: 3", 4½", 6", 8", 10", 12", 14". For hydraulic: 3", 4½", 6", 8" and larger. All balanced for high rpm. Prompt deliveries. Send for catalogs specifying air or hydraulic. The S-P Manufacturing Corp., 30201 Aurora Rd., Solon, Ohio.

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THE S-P MANUFACTURING CORP.
SOLON, OHIO • IN GREATER CLEVELAND
Established 1916
A Bassett Company
ROTATING AIR AND HYDRAULIC CYLINDERS • POWER CHUCKS
NON-ROTATING AIR AND HYDRAULIC CYLINDERS
COLLET AND DRILL PRESS CHUCKS • AIR PISTONS, VALVES, ACCESSORIES

For more details circle NED-584 C7 on enclosed inquiry slip

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Detailed product information on Clipper Belt Hooks and Lacers and case history examples of Clipper machine-lacing benefits are contained in this new folder. Send for Bulletin No. 157 today.

Clipper BELT LACER COMPANY

976 Front Ave., N. W., Grand Rapids, Michigan

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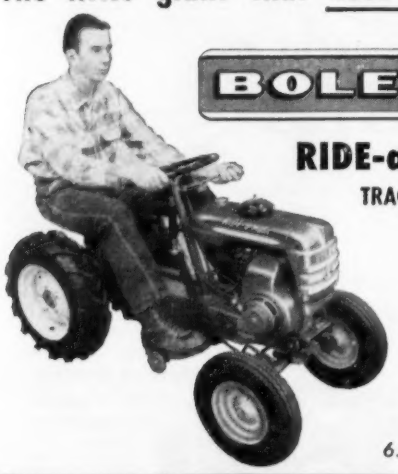
The little giant that does so much



BOLENS

RIDE-a-matic TRACTOR

3.6 hp and 6.6 hp engines

- ☑ Haul loads
- ☑ Mow lawns
- ☑ Cut weeds
- ☑ Roll turf
- ☑ Grade land
- ☑ Plow and cultivate
- ☑ Plow or throw snow
- ☑ Materials handling

The job list for the RIDE-a-matic is constantly growing. What can the RIDE-a-matic do for you?

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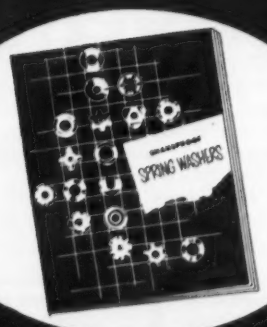
BOLENS PRODUCTS DIVISION
Food Machinery & Chemical Corp.
Port Washington 10, Wisconsin

For more details circle NED-586 C7 on enclosed inquiry slip



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SPRING WASHERS by SHAKEPROOF

Free! Write today for this catalog . . . contains full description and specifications on a wide variety of types and sizes of spring washers.

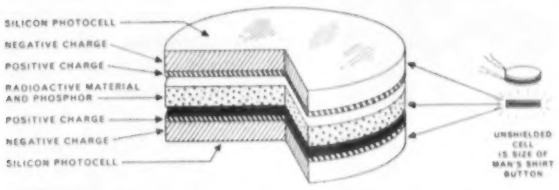
SHAKEPROOF
"Fastening Headquarters"®
St. Charles Road, Elgin, Illinois

SHAKEPROOF / PASTEX — DIVISIONS OF ILLINOIS TOOL WORKS

For more details circle NED-587 C7 on enclosed inquiry slip

MINIATURE ATOMIC BATTERY
delivers power for at least 5 years; safe for extensive personal use

About the size of a thumb tack head, this miniature nuclear powered battery has a nominal power output of 20 microwatts. It is capable of delivering



continuous electrical power for at least 5 years and is safe for extensive personal use without special precautions. Decay energy of a beta-emitting radioisotope is its power source.

Operation is satisfactory at extremes of environmental conditions. At −200° F voltage and power output actually increase and up to 212° F, power output decreases slightly. Output is 10 microwatts after 2½ years and 5 microwatts after 5 years. Greater power can be obtained by connecting a number of cells in series. Cell is not yet commercially available. Developed by Elgin National Watch Co. and **Walter Kidde Nuclear Laboratories, Inc.,** Dept. P, 975 Stewart Ave., Garden City, L. I., N. Y.

For more details circle NED-588 C7 on enclosed inquiry slip

ELEVATING TAILGATE
for ½ and 1-ton trucks

Up to 600 lb can be easily loaded into or unloaded from ½ and 1-ton trucks by the Jiffy-Lift electric elevating tailgate. It features a reversible motor, built-in motor brake and pushbutton control with security lock. Steel ramp type unit weighs 225 lb and is geared to minimize battery drain. All moving parts run on ball bearings. Made by **Mid West Body & Mfg. Co.,** 656 Ashley St., Paris, Ill.

For more details circle NED-589 C7 on enclosed inquiry slip

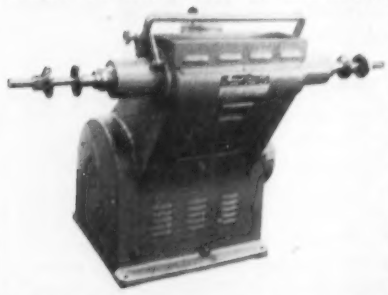
CUSHIONED CLAMP
withstands corrosives, oils, heat

Lining of the Joclamp for wiring and hydraulic lines consists of a molded-to-shape asbestos wire-reinforced strip that is impregnated with Teflon. Cushion-like material combines high temperature characteristics of asbestos with electrical, chemical and mechanical properties of Teflon. Clamps with heat range from −300 to 500° F are impervious to hydraulic fluids, lubricating oils, corrosive fuels and solvents, and will absorb impact shocks, vibration and dimensional changes. Made by **Joclin Mfg. Co.,** 15 Philip Pl., North Haven, Conn.

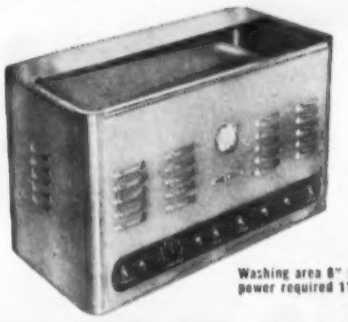
For more details circle NED-590 C7 on enclosed inquiry slip

POLISHING & BUFFING LATHE
variable speed model has braking bar

Brake bar available on the model VRO variable speed polishing and buffing lathe allows its use by the operator on either side of the machine. This safety feature also permits brake use from a sitting position without rising. Heavy duty production machine is suited to polishing, brushing or buffing operations. Its spindle speed is infinitely variable between 1500 and 3000 rpm by turning a conveniently located speed dial. This permits maintenance of correct peripheral speed as wheels and buffs wear. Made by **Hammond Machinery Builders, Inc.,** 1623 Douglas Ave., Kalamazoo, Mich.



For more details circle NED-591 C7 on enclosed inquiry slip



Washing area 8" x 8" x 8"; power required 115V 60 cycles.

Compact "PACKAGE" Unit cleans Parts ULTRASONICALLY in Seconds

The Curtiss-Wright Ultrasonic Washer WB1-5 provides an improved parts cleaning method which meets today's higher standards, closer tolerances and ultra-precision design of component parts. Now practical for all types of production parts washing, this self-contained stainless steel unit *super-cleans* all dirt and grease away in mere seconds, even the most complicated or "problem" shapes having grooves and hollow areas. Space-saving, safe to operate and low in cost, the WB1-5 can effect a saving of up to 75% over conventional parts cleaning methods. Our engineers will arrange demonstrations.

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CURTISS-WRIGHT
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CANADIAN REPRESENTATIVE: CURTISS-WRIGHT OF CANADA LIMITED, MONTREAL

For more details circle NED-592 C7 on enclosed inquiry slip

For Proper, Low-Cost Replacement and Maintenance

GITS

World's Largest Selection of Low-Cost Lubricating Devices

LUBRIKIT... An assortment of 95 oil cups of 29 different types. Gits sales records show these oilers are most used for replacement and maintenance. Contents of each separate bin are clearly described on inside cover.

Special Introductory Price JUST $14.95 F.O.B. FACTORY

Satisfaction or Your Money Back

SIGHT GRAVITY FEED MULTIPLE OILERS

This one unit replaces 3 to 8 individual oilers. Maximum practicality in a small central lubrication system. Positive cut-off during idle periods. Individual vibration-proof needle valve adjustments. With solenoid control (Illustrated): Style MDS—No. 4685-A. Without solenoid: Style MD.

Too much machine "down-time"? Too much time wasted in servicing your machinery? Perhaps some old, worn lubricating devices need replacement. Maybe a different, more modern device will do the job more efficiently. Whenever you replace, specify GITS Lubricating Devices—the widest selection available anywhere, right in stock. The items pictured above are only a few of our many thousands of lubricating devices. Send NOW for your free Catalog.

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The Standard For Industry For Almost Half A Century
1833 South Kilbourn Avenue
Chicago 23, Illinois

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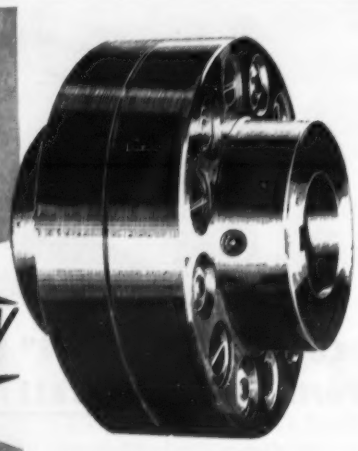
IT PAYS TO SPECIFY

AJAX

flexible couplings

when you order new equipment

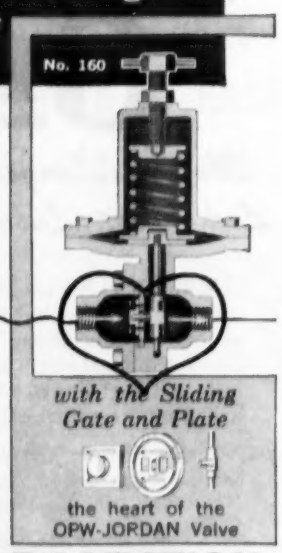


The finest equipment deserves the finest couplings,—safeguard against destructive wear due to unavoidable misalignment. Always specify AJAX FLEXIBLE COUPLINGS when you order. Standard of the industry for over 30 years.

AJAX FLEXIBLE COUPLING CO. Inc.
WESTFIELD, N. Y.

For more details circle NED-595 C7 on enclosed inquiry slip

OPW-JORDAN
pressure reducing
VALVE*



- DEAD END SHUT-OFF
- WIRE DRAWING MINIMIZED OR ELIMINATED
- SELF-LAPPING SEAT
- NO HUNTING . . . SHORT STROKE FOR IMMEDIATE RESPONSE

THE DIFFERENT AND IMPROVED WAY TO CONTROL PRESSURE.

The unique basic design and exclusive features of this valve are responsible for its outstanding performance and long dependable service life—its precise regulation with immediate response and unusual sensitivity.

*Daily replacing troublesome pilot operated valves.

For more facts, write for Bulletin J-160.

JORDAN CORPORATION
Division of OPW Corporation
6013 WIEHE ROAD
CINCINNATI 13, OHIO
ELmhurst 1-1352

For more details circle NED-596 C7 on enclosed inquiry slip

Sets both ¼" and ⅜" diameter studs in steel or concrete!

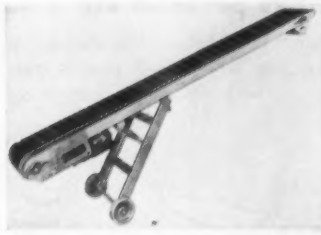
CUT FASTENING TIME AND COSTS with new one-man tool that sets both ¼" and ⅜" diameter studs at speeds up to 6 a minute. Securely anchors wood sections and steel fixtures to steel and concrete. Blank cartridge type Power-Loads—no wires or cable. No pre-drilling needed. Mail reader service card for copy of informative booklet.

Remington DU PONT

Industrial Sales Div. NED-3 Remington Arms Co. Inc. Bridgeport 2, Conn.

For more details circle NED-597 C7 on enclosed inquiry slip

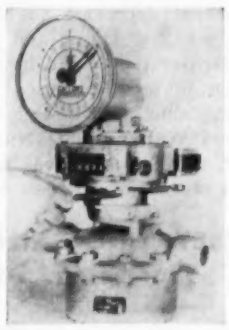
BOOM CONVEYOR
in 11, 16 and 21-ft lengths



Adaptable to many levels or inclined planes to 26 degrees, this Handibelt Boom conveyor is suitable for truck loading, warehouse piling, as part of a flexible conveyor system, or assembly table operation. Boom is available in 11, 16 and 21-ft lengths, with 14 or 20-in. width belting. Discharge end can be supported in various ways. Made by **Standard Conveyor Co.**, Dept. NED, 315 N. W. Second St., North St. Paul 9, Minn.

For more details circle NED-598 C7 on enclosed inquiry slip

AUTOMATIC CONTROL SYSTEM
for metering pumps, control valves



Automatic switch control of all pumps and quantity control valves right at the meter is provided by this explosion-proof control system. Upon completion of a predetermined liquid delivery, switch is automatically thrown, opening an electrical circuit and cutting off all liquid flow at the meter and all pumping action. Accessory control switch, predetermining register and latch box, and quantity control valve comprise the system. Made by **Rockwell Mfg. Co.**, Meter & Valve Div., Dept. NED, 400 N. Lexington Ave., Pittsburgh 8, Pa.

For more details circle NED-599 C7 on enclosed inquiry slip

POWDERED METAL PRESS
compacting unit rated at 30 tons offered with various accessories

Welded steel D-frame of the Baldwin 30-W compacting press supports the die set on all sides. Rated at 30 tons pressure, the powdered metal fabrication press can be easily equipped in the field with such accessories as independent floating core rod support for forming blind holes, cushion cylinder for operating secondary top punch, prepressing die control, dual ejection mechanism and precision adjustment indicators.

Machine has a variable speed drive and operates at 10 to 40 strokes per minute. It can also be used for ceramics, carbides, cermets and ferrites. Head stroke and maximum daylight are 6¾ in. Ejection capacity is 20 tons and ejection stroke is adjustable up to 4½ in. Depth of fill is adjustable up to 4½ in. and die opening is 10 in. Made by **Baldwin-Lima-Hamilton Corp.**, Hamilton Div., Box 131, Hamilton, O.

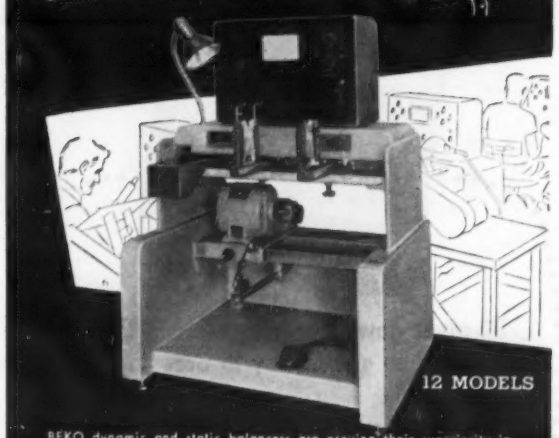
For more details circle NED-600 C7 on enclosed inquiry slip

FILTER & PUMP
handles corrosive solutions

This VPHI-20 plastic, self-priming filter pump removes one micron particles from acid or alkaline electroplating and industrial solutions. Unit has polyethylene body and a Hypalon impeller. It is flexibly coupled to ¼-hp totally-enclosed, ball-bearing motor and will filter 50 to 300 gph. Bakelite polyvinyl chloride filter chamber contains two Dynel filter tubes which filter chromic acid, iron and lead fluoborate, ferric chloride, silver nitrate, sodium hypochlorite and similar solutions. Reversing operation allows clean out of filter chamber without dismantling. Other features include rubber tire casters and 20 ft of vinyl hose. Made by **Sethco Mfg. Co.**, Dept. NED, 70-78 Willoughby St., Brooklyn 1, N. Y.

For more details circle NED-601 C7 on enclosed inquiry slip

Best PRODUCTION STANDARDS *with* *Better* BALANCERS BY BEKO



BEKO dynamic and static balancers are proving their superiority in use every day and you can better your existing production standards at a surprisingly low initial cost. These BEKO balancers are geared for high production on close tolerance work. Their simplicity of operation with optimum worker convenience allows thoroughly efficient operation by unskilled workers. Accurate calibration directly in terms of unbalanced correction either to remove or add weight.

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BALANCE ENGINEERING CO. • CHICAGO

Sales Division: MACDELL CORP. 842 W. LAKE ST. • DEPT. NED. CHICAGO 7, ILL.

For more details circle NED-602 C7 on enclosed inquiry slip

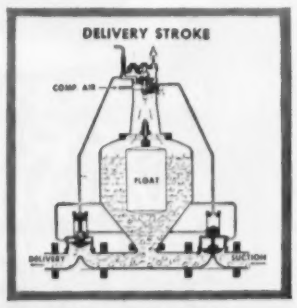
Pumps abrasive liquids that grind other pumps to a halt

Suspended silicon-carbide, pottery slip, gritty sumps—violently abrasive liquids and semi-solids of all kinds flow smoothly through *Ejectopump*. Compressed air operated, it has no rotating or reciprocating parts, no bearings, no packing, needs no lubrication. Requires little attention of any kind, yet keeps on pumping abrasives month after month, long after other pumps have ground to a halt.

Secret of *Ejectopump's* dependability is its smooth, yet powerful action—no churning, whirling or chopping of material being pumped.

Operation

Connect to compressed air line 30 to 50 psi. Handles discharge heads up to 100 ft., with maximum suction 20 ft. Pump is self-priming, may be installed above level of liquid pumped. Can be furnished in special alloys for pumping corrosives. Sizes: 1½", 2", 3", 4", 6". *WRITE TODAY* for complete information and prices.



FERRO

FERRO CORPORATION
4150 East 56th Street, Cleveland 5, Ohio

Ejectopump
COMPRESSED AIR OPERATED

For more details circle NED-603 C7 on enclosed inquiry slip

Right EVERY TIME!

Indicating MIKEMASTER

0-1" Size

$65.00

In Plastic Case

Patented

Use as Snap Gage with Anvil Retractor

Regardless of who is using it, Mikemaster always gages with the same pressure, and always gages accurately. The quick reading indicator scale, graduated in .0001", shows the size at a glance. If you're measuring duplicate parts, use the push button anvil retraction and the tolerance hands and you'll have a handy Indicating Snap Gage. Mikemaster is nicely balanced, built to last, consistently accurate. To learn more about this *different* micrometer, write

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7173 Eddy Street • Providence 1, R. I.

Ask FEDERAL First

FOR RECOMMENDATIONS IN MODERN GAGES . . .

Dial Indicating, Air, Electric, or Electronic—for Inspecting, Measuring, Sorting, or Automation Gaging

▲ For more details circle NED-604 C7 on enclosed inquiry slip ▲

FOR MARKING — NUMBERING — CODING —

Use the Nissen MARKER

The Nissen Marker is a handy, easy-to-use, ball-point writing tube containing a special fast drying ink for marking all types of metal, wood, plastic, glass, etc. The ink withstands heat and weathering under adverse conditions and will not readily chip, fade or rub off.

Several size ball points are available for making thin or heavy lines and for smooth or rough surfaces.

7 STANDARD COLORS

JOHN P. NISSEN, JR., CO.
Manufacturers
GLENSIDE, PA.

BALLPOINT
Makes Easy Application

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WHEN?

When is the best time to put out a fire? The instant it starts, with a Kidde Carbon Dioxide Extinguishing System. Available with automatic or manual operation, self-contained Kidde built-in systems use pressurized carbon dioxide to smother fire in seconds. No mess to clean up, no falling weights, no parts replacement after a blaze. Write for Kidde's Systems Catalog.

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Kidde

Walter Kidde & Company, Inc.
324 Main St., Belleville 9, N. J.

▲ For more details circle NED-606 C7 on enclosed inquiry slip ▲

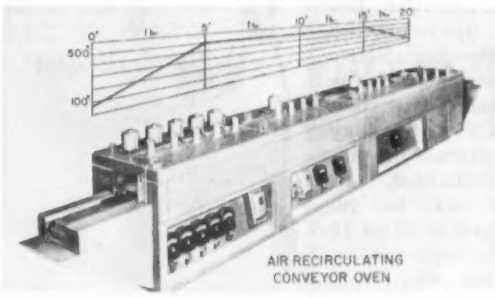
PNEUMATIC LIFT TABLE
has ball-transfer or roller top

Four air cylinders operating on 100 psi actuate the Liftable, offered in 5 and 10-ft lengths and widths up to 48 in. Capacity range is 1000 to 10,000 lb. In its raised position the load cannot move, but when lowered, load can be moved in any direction. Illustrated table has ball transfers, although a roller base is also available. Unit can be inserted in a conveyor line or used separately. Made by **Sage Equipment Co.**, 28 Essex St., Buffalo 13, N. Y.

▲ For more details circle NED-607 C7 on enclosed inquiry slip ▲

CONVEYOR HEAT TREAT OVEN
has four separate heat zones

In a 20-ft length, this air recirculating conveyor oven provides four individually controlled temperature zones covering a four-hour heat treating period. Temperatures can be controlled to 1800° F, ±20° F. Forced air blowers move air across treated material, insuring uniform heat distribution throughout oven sections. Oven is used to anneal, temper, harden, bake, dry and cure glass, ceramics, paints, solvents and ferrous and nonferrous metals. It is constructed in prefabricated sections for installation flexibility. Ovens can be designed to fit specific heat cycles and physical properties of production materials. Made by **Electric Hotpack Co.**, 5063 Cottman St., Philadelphia 35, Pa.



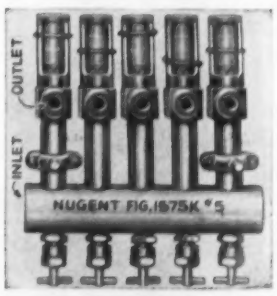
▲ For more details circle NED-608 C7 on enclosed inquiry slip ▲

ELECTRIC FLOOR SWEEPER
indoor-outdoor 36-in. swath unit

Fine dust and heavier floor and outdoor debris, including grass cuttings and leaves, are picked up by this electrically powered sweeper for indoor or outdoor use. Maneuverable machine cleans walks and aisles, as well as larger areas. It has a 36-in. sweeping swath, plus 11 in. covered by a side broom that sweeps along walls, curbing and machines. Over 30,000 sq ft per hour can be covered. Made by **Modern Power Sweeper Co.**, 736-8 N. McKeever Ave., Azusa, Calif.

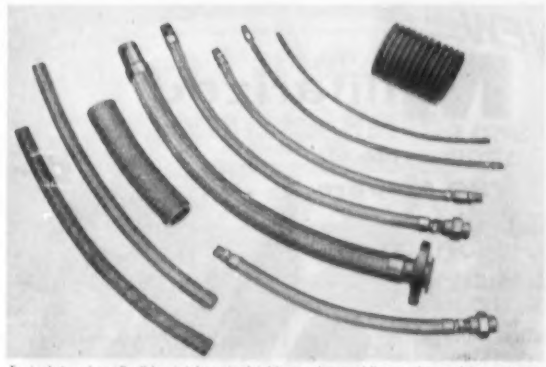
▲ For more details circle NED-609 C7 on enclosed inquiry slip ▲

PRESSURE LUBRICATOR
in single or multiple units



Lubricating oil or other liquids can be delivered under pressure, in accurately measured quantities, to high or inaccessible points by this sight flow lubricator. Available as single unit or in multiples to 15, each lubricator is capable of feeding fluid varying from several drops to 2 pt per minute by adjustment of individual needle valves. Single units have ¼ or ⅜ in. inlet and outlet, while multiple units range to ¾-in. inlets with outlets of ¼ or ⅜ in. All are designed for 125-psi maximum. Made by **Wm. W. Nugent & Co.**, 3402 Cleveland St., Skokie, Ill.

▲ For more details circle NED-610 C7 on enclosed inquiry slip ▲



Typical American flexible stainless steel tubing and assemblies engineered to customer requirements.

FLEXIBLE TUBING THAT RESISTS CORROSION

Flexible stainless steel tubing made by American Metal Hose is an ideal, economical flexible connector wherever you have to convey searching or corrosive liquids or gases under either high or low temperature and pressure conditions. This flexible tubing stands up under continuous flexing . . . absorbs severe vibration . . . compensates for misalignment . . . is easily installed.

FREE FOLDER: Gives engineering data on construction and types. Includes pressure ranges, data on fittings. Write for Bulletin STC-1. The American Brass Company, American Metal Hose Division, Waterbury 20, Conn.

ATLAS

WHEREVER CONNECTORS MUST MOVE AMERICAN Flexible Metal Hose and Tubing

an ANACONDA® product

▲ For more details circle NED-611 C7 on enclosed inquiry slip ▲

the original DOUBLE-ACTION

Go-Jo

REG. U. S. PAT. OFFICE

HAND CLEANER

REMOVES GREASE AND GRIME—all Stubborn Soil IN 1/2 THE TIME

. . . easier
. . . faster
. . . safer

Cuts HAND CLEANING COSTS 50% AND MORE

saves time
saves money

The First and Only Fully Automatic
"ONE SHOT" DISPENSER

Amazing double-action cleaner—may be used with or without water—provides the best in fast action, removal of grease, grime, paint, ink, asphalt—all stubborn soil. No harsh abrasion — guards against Dermatitis — soothing, safe protection for the skin.

Proven highest time-saving efficiency with "one-shot" dispenser — gives just the right amount every time — convenient replaceable throw-away can. It's time you investigated Go-Jo.

GET DETAILS

Send for information to
GOJER, INC., Box 991, Akron, Ohio

Name _____ Title _____
Company _____
Address _____
City _____ State _____

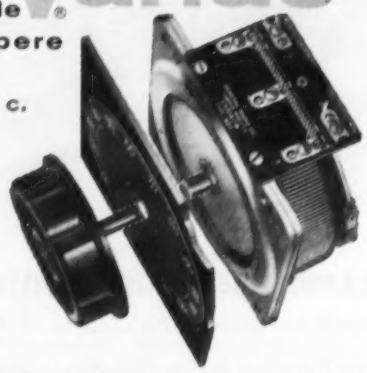
America's Largest Manufacturer of Creme Type Hand Cleaners

▲ For more details circle NED-612 C7 on enclosed inquiry slip ▲

NEW Militarized Variac®

350 to 1200 cycle

20 Ampere



Input: 115 v., 350-1200 c.

Load Rating: 3.0 kva

Output Voltage: 0-115 or 0-135

Rated Current: 20 a.

Maximum Current: 26 a.

Manufactured to conform with rigid military specifications for shock, vibration, salt spray and tropicalization.

Type **M20** VARIAC (uncased): $48.00

Available also in 2-gang and 3-gang uncased models for $107.00 and $155.

GENERAL RADIO Company

275 Massachusetts Avenue, Cambridge 39, Massachusetts, U.S.A.

Broad Avenue at Linden, Ridgefield, N. J. NEW YORK AREA 920 S. Michigan Ave. CHICAGO 5
8055 13th St., Silver Spring, Md. WASHINGTON, D. C. 1150 York Road, Abington, Pa. PHILADELPHIA
1000 N. Seward St. LOS ANGELES 38 1182 Los Altos Ave., Los Altos, Calif. SAN FRANCISCO

▲ For more details circle NED-613 C7 on enclosed inquiry slip ▲

INDUSTRY REPORTS ON WT WALKER-TURNER

"Our toolroom has come to rely on W-T drill presses for close-tolerance drilling"

reports G. F. Gilligan, plant manager, The Electrical Products Division, Joy Manufacturing Co.

The Electrical Products Division of Joy Manufacturing Co., St. Louis, Mo., manufacturers of electrical connectors, purchased one Walker-Turner 20" drill press several years ago. Results were so satisfactory that the company now has 15 units. Two are being used in the tool department for machining fixtures, dies and molding equipment—work that demands extreme accuracy.

Of particular note is the use of two Walker-Turner four-spindle drill presses on the production line for drilling and chamfering contacts. Now this work is being done faster and at less cost than with the larger, expensive machinery formerly used.

Plant manager Gilligan and production foreman Rimmel have this to say about the performance of W-T presses: "Their slightly higher initial cost over competitive equipment has been more than offset by the high quality of work produced and the fact that we have had no maintenance problems with the presses."

Ask your W-T distributor to demonstrate what Walker-Turner "Light-Heavyweight" machine tools can do for you. He's listed under "Tools" in your telephone book. Or mail the coupon below for details.

walker-turner

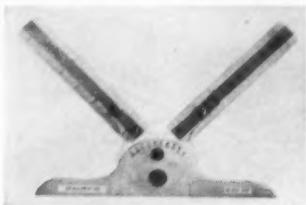
WALKER-TURNER
Division of Rockwell Manufacturing Co.
Dept. WC-45, 400 N. Lexington Ave.
Pittsburgh 8, Pa.

☐ Please send name of my Walker-Turner distributor.
☐ Please send literature on Walker-Turner drill presses.

Name_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-614 C7 on enclosed inquiry slip ▲

DRAFTING SCALE
used with T-square or straight edge



Two beveled flat scales are attached to swivel quadrant of the Adjustable Scale-Drafter, made of durable acrylic plastic for use with a T-square or straight edge. Quadrant rotates on a base with a protractor graduated from 10 to 90 degrees on an oval shaped guide. Markings permit vernier settings. Instrument can be ordered in 6 or 12-in. length, with 1/8 to 1/4-in. and 1/2 to 1-in. to the foot architect's scales; 1/10 and 1/50-in. to the foot engineer's scales; one-half size reading to 1/32-in., full-size reading to 1/16-in., or in 1/50 and 1/32-in. mechanical draftsman's scales. Made by **Alvin & Co.**, Palisado Ave., Windsor, Conn.

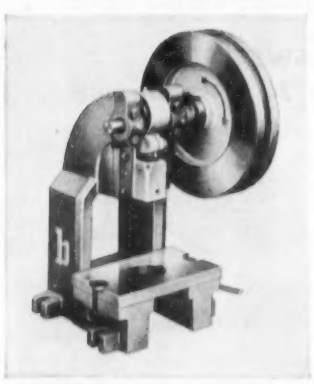
▲ For more details circle NED-615 C7 on enclosed inquiry slip ▲

ELECTRIC INDUSTRIAL TRUCKS
mount combination battery, charger

Suited for single shift operation, line of operator-led Transporter electric industrial trucks is available with combination battery and charger. If fully discharged, battery can be recharged in 10 to 16 hours, with no attendant required. Low finishing charge rate minimizes gassing and electrolyte loss. Charger is plugged into any 115 v, 60-cycle ac circuit without disconnecting the battery truck lead connector. Made by **Automatic Transportation Co.**, 149 W. 87th St., Chicago 20, Ill.

▲ For more details circle NED-616 C7 on enclosed inquiry slip ▲

GAP FRAME PRESS
2-ton fixed bed model



Coil or sheet stock can be handled through the 4½-in. wide opening in the back of this 2-ton fixed bed gap frame press. Its 4½ x 7½-in. bed has a circular opening beneath the ram, making it suitable for foil applications. Maximum shut height, bed to slide, is 4¼ in. with standard stroke of ¾-in. Other strokes are available. Press has heavy duty sliding key type clutch, adjustable gibs with ball type ram adjustment and operates at 280 to 290 strokes per minute. Weight, less motor, is about 100 lb. Made by **Benchmaster Mfg. Co.**, Dept. NED-3, 1835 W. Rosecrans Ave., Gardena, Calif.

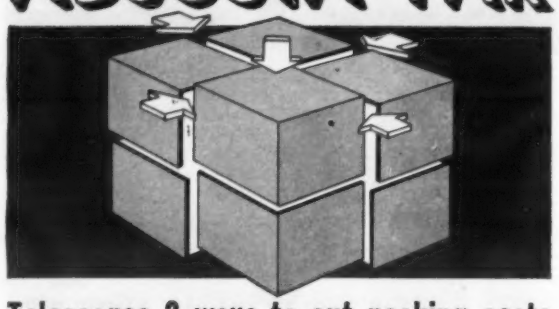
▲ For more details circle NED-617 C7 on enclosed inquiry slip ▲

DISPERSION MILL
has two to five grinding stages

High speed wet milling and grinding, dispersing and homogenizing can be performed on the PUC multistage dispersion mill. It is automatically fed and discharged under pressure. Coarse and lumpy materials are reduced to micro-range particle size in a single pass. Machine is suitable for batch or continuous operations. Six models have capacities from 40 to 6000 lb per hour. Milling faces consist of conical, ring-shaped rotor-stator assembly having from two to five grinding stages, depending upon model. Made by **Dispersion Machinery Co.**, Box 153, Rochester 10, N. Y.

▲ For more details circle NED-618 C7 on enclosed inquiry slip ▲

ADJUSTA-PAK



Telescopes 3 ways to cut packing costs

For combining packages of various sizes into one secure unit, there's nothing like Signode's Adjusta-Pak (patented).

How it works: eight scored and slotted sheets of corrugated are quickly folded into Adjusta-Pak sections that telescope in three dimensions. Packed container is secured with Signode steel strapping.

What it does: ends the search for a right-size container and the waste of cutting containers to size. Cuts dunnage, saves cubage and weight, prevents pilferage. Ideal for overpacking domestic containers for export.

Adjusta-Pak comes in three standard sizes. Free descriptive folder shows details, includes size chart. Write for your copy.

SIGNODE STEEL STRAPPING CO.

Dept. SP, 2643 N. Western Avenue, Chicago 47, Illinois
Offices coast to coast.
Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

▲ For more details circle NED-619 C7 on enclosed inquiry slip ▲

Where horsepower loads are heaviest . . . that's where Sier-Bath Flexible Gear Couplings are stand-outs in performance, economy! For any given shaft size from 3" to 12" Sier-Bath costs average 21-percent lower than other leading brands . . . and you get higher capacities in every size. You save many ways with Sier-Bath . . . in space, weight, assembling and uncoupling time and effort. Sizes from ⅞ to 12, 4 to 4500 hp/100 rpm.

Simpler! only 7 parts

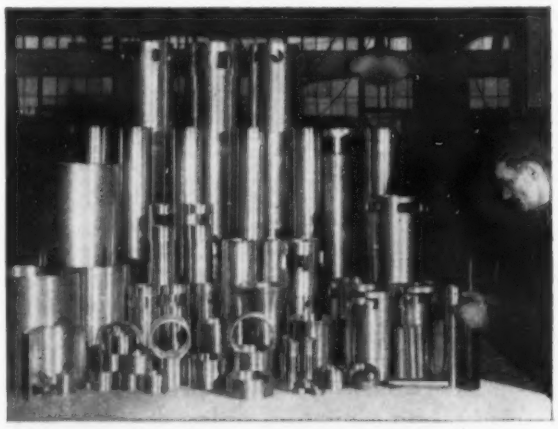
Smaller and Lighter! ⅔ Usual Size ½ Usual Weight

Send for complete catalog data

Sier-Bath GEAR and PUMP CO., Inc.

9242 HUDSON BLVD., NORTH BERGEN, N. J.

▲ For more details circle NED-620 C7 on enclosed inquiry slip ▲



NO ROOM FOR TROUBLE . . . because these bronze pump liners and other marine parts have been centrifugally cast by Shenango. Centrifugal action forces all gas and impurities from the molten metal. Defects that ordinarily show up in machining or service are eliminated. Next time you need pump liners, propeller shaft sleeves, stern tube bearings, bushings, or any annular or symmetrical part, rough or precision finished, contact: Centrifugally Cast Products Division, The Shenango Furnace Company, Dover, Ohio.

SHENANGO CENTRIFUGAL CASTINGS

COPPER, TIN, LEAD, ZINC BRONZES • ALUMINUM AND MANGANESE BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL • ALLOY IRONS

▲ For more details circle NED-621 C7 on enclosed inquiry slip ▲

HIGH EFFICIENCY R&M-Hunter INDUSTRIAL FAN

R&M HUNTER

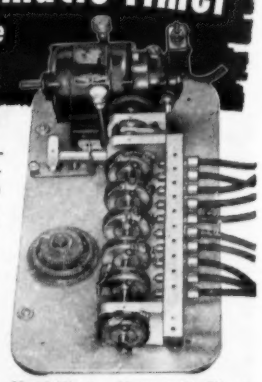
For sidewall, penthouse, spot cooling

- 24" to 48" blades
- Effective up to 1/2" static pressure
- Totally enclosed motor
- Easily installed frame
- Streamlined air inlet
- Automatic shutters
- Certified air deliveries

For catalog and prices, write
HUNTER DIVISION — ROBBINS & MYERS, INC.
2450 Frisco Ave., Memphis 14, Tenn.

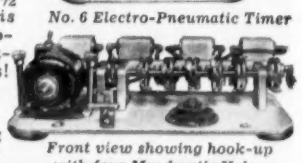
For more details circle NED-622 C7 on enclosed inquiry slip

THIS CLEVER, DEPENDABLE
Electro-Pneumatic Timer
Controls Intricate Work Cycles...



This simple but astonishingly ingenious unit distributes air pressure to air-operated cylinders, presses, hammers, work feeders, clamping fixtures, chip blowers, work ejectors . . . each independent as to start, duration and end of cycle. Simply connect up 6, 12 or more cylinders in numerous sequences from 2½ to 33½ seconds. *You need this inexpensive* Mead Electro-Pneumatic Timer for cost-saving automation jobs!

No. 6 Electro-Pneumatic Timer



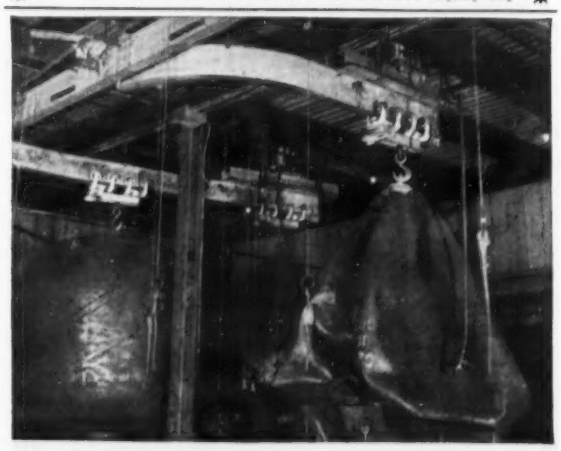
Front view showing hook-up with four Meadmatic Valves

Write Factory or Nearest Mead Representative For Bulletin NA37
Write for our cost-saving catalog. Or let the Mead Man show you.

(See Volume III Thomas' Register for nearest distributor's address, phone number.)

MEAD SPECIALTIES COMPANY
4114 N. Knox Ave., Dept. NA-37, Chicago 41, Ill.
PATHFINDER IN AIR POWER AUTOMATION

For more details circle NED-623 C7 on enclosed inquiry slip



Teamed Engineering for Efficient Sealdbulk Handling

U. S. Rubber Company and American MonoRail Engineers teamed up to develop this system.

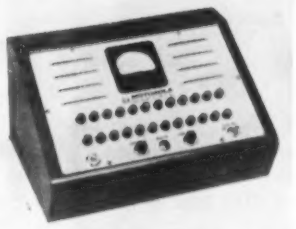
Sealdbin containers, made by U. S. Rubber Co., each hold 11,000 pounds of carbon black. American MonoRail moves the Sealdbins from flat cars to special stations for discharge thereby minimizing manual labor, time, and waste.

Send for Bulletin C-1.

AMERICAN MONORAIL COMPANY
13116 ATHENS AVENUE • CLEVELAND 7, OHIO

For more details circle NED-624 C7 on enclosed inquiry slip

COMMUNICATIONS CONSOLE
for two-way radio installations



Complete selective calling facilities for land-mobile two-way radio base station installations is provided by the Quik-Call signaling package. The compact console combines all tone signaling elements, including tone generator, timer, power supply and code selector. A mobile receiver in a two-way system responds only to calls specifically directed to it. Signaling can also be used to operate bells, lights, sirens or other devices remotely. Units equipped with decoder elements are individually selected by transmitting a code consisting of two dual audio tones. Auxiliary selectors, providing one-touch transmission of the four-tone code, can be connected in parallel with the console. Each added selector allows 32 codes to be preselected. Made by **Motorola Inc.**, Communications & Electronics Div., Dept. NED, 4501 W. Augusta Blvd., Chicago 51, Ill.

For more details circle NED-625 C7 on enclosed inquiry slip

MERCURY VAPOR LAMPS
improved phosphor gives more light

As much as 63 per cent more light is reported for two white mercury lamps as compared to previous G-E 400-w mercury lamps. This results in as much as 33 per cent lower cost of light, according to the manufacturer. Improved performance results from use of newly developed strontium magnesium orthophosphate phosphor which converts ultraviolet radiation into high percentage of white light. Types available are H400-RW1, a reflector lamp which directs two-thirds of the light to the work surface and also seals the reflector against dirt and fumes, and the H400-EW1 in the familiar bulged tubular shape. Made by **General Electric Co.**, Lamp Div. Dept. 166-NED, Nela Park, Cleveland 12, O.

For more details circle NED-626 C7 on enclosed inquiry slip

CARBIDE GAGE POINTS
for standard and special gages

Points for standard and special gages, made of wear resistant Norbide boron carbide, remain clean throughout their useful life, will not pick up dust or become charged, and do not scratch work of any metal. Points get increasingly smooth with use. Brown & Sharpe No. 951 electronic comparator is shown with the Norbide points, made by **Robert Marks Co.**, 47 Goddard St., Providence, R. I.

For more details circle NED-627 C7 on enclosed inquiry slip

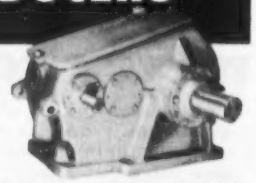
SAFETY DOOR CONTROL
for industrial door operators

Convenience is combined with safety in this model MC pushbutton control for industrial and commercial overhead doors. One touch of the "open" button opens the door completely, but continuous pressure is required on the "close" button until the door is fully closed. Thus, supervision of the doorway is assured while the door is closing. If the "close" button is released at any time during closing, the door is reversed automatically. Made by **Barber-Colman Co.**, Dept. 5G, Drawer 99, Rockford, Ill.

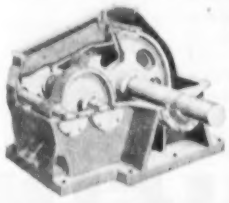
For more details circle NED-628 C7 on enclosed inquiry slip

FOR Top Performance AT Sensible Prices
USE ALTEN SPEED REDUCERS

IMMEDIATE DELIVERY ON STANDARD MODELS FROM STOCK . . .



Choice OF HELICAL OR HERRINGBONE GEARS WITH CAST IRON HOUSINGS



Alten Speed Reducers have proved their stamina in use for years in the petroleum industry. Now available in the right capacity, ratio, reduction, speed and drive for your every industrial use.
Alten engineers available for advice and consultation on any speed reduction application. Write.

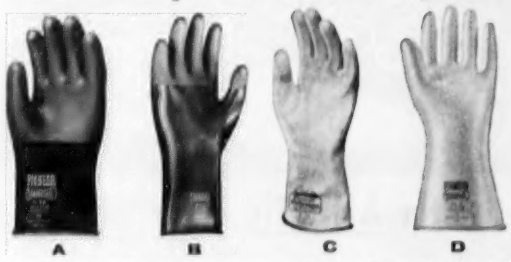
Designers & Builders of Equipment for Industry Since 1889

ALTEN Foundry & Machine Works, Inc. LANCASTER, OHIO

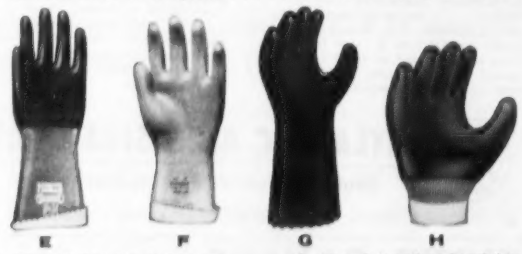
For more details circle NED-629 C7 on enclosed inquiry slip

A Long-Wearing PIONEER Glove

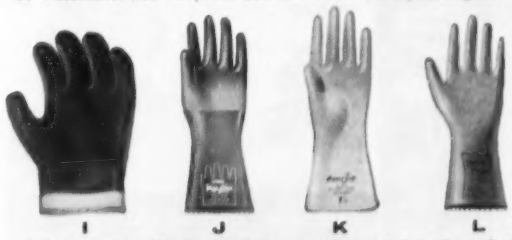
For Every *Hand*...Every Job



A Stanzoil Black All Neoprene . . . . . 7 sizes, 5 lengths, 3 weights
B Stanzoil Red All Neoprene . . . . 3 sizes, 10½" length, sheer wt.
C Whitecap White All Neoprene. . . . 3 sizes, 10½" length, light wt.
D Stanzoil White All Neoprene . . . . . 7 sizes, 4 lengths, 3 weights



E Stanzoil Knit-Lined Neoprene . . . . 5 sizes, 3 lengths, 2 weights
F Stanzoil Flock-Lined Neoprene . . . 3 sizes, 10½" lengths, light wt.
G Pacemaker Black Neoprene Coated Flannel . 2 styles, 4 lgths., 2 wts.
H Pacemaker Red Neoprene Coated Flannel . 3 styles, 3 lgths. 2 wts.



I Stanflex Blue Plastic Coated Jersey . Full and Palm-Coat, 3 styles
J Stanflex Knit-Lined Red Plastic . 4 sizes, 11" length, medium wt.
K Sheergrip Rubber or Neoprene . . . . . 9 sizes, 3 lengths, sheer wt.
L Nimble Fingers Pylox® Vinyl . . . 3 sizes, 10½" length, extra sheer

Mail This Coupon Today!

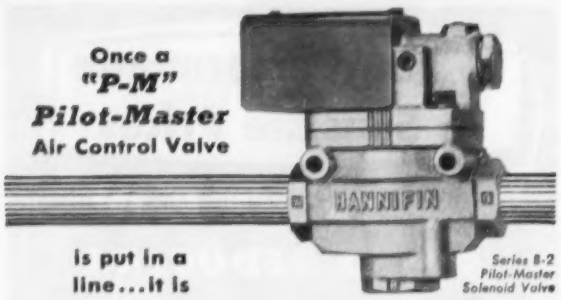
The PIONEER Rubber Co.
234 Tiffin Road (Line)
Willard, Ohio, U.S.A.

Please send me:
☐ The name of my nearest PIONEER Glove Distributor.
☐ 1956-57 PIONEER Industrial Glove Catalog.
☐ Hand Protection Clinic glove recommendation for job described in enclosed letter.

Firm _____
Address _____
City _____ Zone ____ State _____
Signed _____

For more details circle NED-630 C7 on enclosed inquiry slip

Once a "P-M" Pilot-Master Air Control Valve



is put in a line...it is

Series 8-2 Pilot-Master Solenoid Valve

never removed!

That's right: You use a pipe wrench only once...then never touch the piping again. To renew this valve you simply replace a cartridge that contains all the working parts. The valve body—a simple, sturdy housing—need never be removed from the line. Think of what this can mean to you in reduced down time and lower maintenance costs! Plan now to standardize on Hannifin Pilot-Master Valves.

- 2-way, 3-way and 4-way
- All sizes ¼" to 1¼"
- Pressures from 15 to 150 P.S.I.

WRITE FOR BULLETIN NO. 231

HANNIFIN

Hannifin Corporation, 527 S. Wolf Road, Des Plaines, Illinois
AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

For more details circle NED-631 C7 on enclosed inquiry slip

...with Atlantic cup wheels

Faster . . . cleaner, cooler-running Atlantic Cup Wheels are made with a special resinoid bond and wider lips . . . provide maximum wheel strength for continuous high-speed operations.
Safer . . . for maximum safety, every Atlantic Cup Wheel made—from the 2½" to 8" size inclusive—is speed tested at a 50% higher speed than that required for normal snagging operations.

More economical, too! Because they wear longer and seldom have to be dressed, Atlantic Flare and Straight-Type Cup Wheels eliminate the need for frequent replacements . . . keep operating costs at a minimum. Prove it for yourself. Call your nearby Atlantic representative or write direct. Atlantic Abrasive Corporation, 504 Pearl Street, South Braintree, Massachusetts.

ATLANTIC ABRASIVE CORP.
South Braintree 85, Massachusetts

For more details circle NED-632 C7 on enclosed inquiry slip

SIGHT SAVERS

silicone treated tissues

KEEP SAFETY GLASSES CLEAN AND SAFE

Millions of workers now use and prefer Sight Savers. Compact cleaning stations dispense them conveniently and economically. Cleaning stations are Free ($2.50 value) with purchase of Sight Savers. Available from leading Safety Equipment Distributors.

free

handy Dispenser/Pak for your personal use and full information on Sight Saver Cleaning Stations.

5415a

DOW CORNING CORPORATION Midland, Michigan

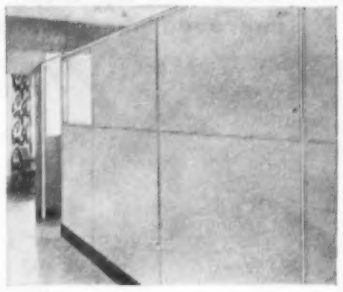
For more details circle NED-633 C7 on enclosed inquiry slip

WIRE ROPE SPLICER
soft metal sleeve swaged on rope

Smooth, firm looped ends are easily and quickly formed on wire rope up to 1½ in. diameter by line of Herculoc hydraulic splicing machines. Process utilizes a soft metal sleeve or clamp which is swaged or compressed around the two adjoining portions of rope into a splice which exceeds breaking strength of the wire rope itself. Neat, waterproof splice can be double tapered for safe use. Slings, loops, rigging and other wire rope assemblies are quickly made. Corrosion resistant alloy sleeves are available for ⅛ to 1½-in. diameter wire ropes. Splicing press is available as 60-ton manual hydraulic model, 280-ton electric hydraulic model or 800-ton electric hydraulic unit. These models accommodate wire rope diameters from 1/64 to 23/64-in., 1/64 to ¾-in. and ⅛ to 1½-in., respectively. Made by **Herculoc Corp.**, Dept. H-4, 201 62nd St., Brooklyn 20, N. Y.

For more details circle NED-634 C7 on enclosed inquiry slip

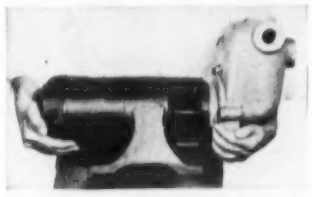
LOW-COST MOVABLE WALLS
acoustical panels easily erected



Sound - deadening movable walls for offices or factories are easily erected with Budgex Wall. Consisting of prefabricated panels, walls have flush surfaces which are washable and repaintable. Sound retarding core of spun glass fibers is used in glazed or solid panels of either 7 or 8-ft height. Either can be extended to ceiling by filler panels. Doorway panels supplement the wall units. Electrical raceways for wiring are provided in base and around doorways, as well as in switch box channels. Solid, window or ventilating type flush doors are supplied hung on frames and complete with hardware. Partitions are readily taken down and reused when remodeling or changing a floor layout. Made by **G R Products, Inc.**, Dept. D, 2417 Eastern Ave., Grand Rapids, Mich.

For more details circle NED-635 C7 on enclosed inquiry slip

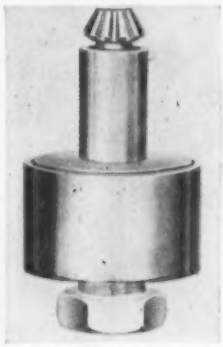
CENTRIFUGAL PUMP
in ½, ¾ and 1-hp monoblock models



Lightweight self-priming, self-lubricating centrifugal pump is available in ½, ¾ and 1-hp ratings with choice of 1 or 1½-in. suction and discharge openings. The monoblock pump features extra-heavy shaft, Pyramid mount and dual discharge openings for piping flexibility. It has a rising head-capacity curve, making it practical for many filter applications. Solid aluminum casing, head and impeller are responsible for pump's light weight. The ¾-hp unit shown weighs only 62 lb. Both motor and engine driven units will be available in up to 6-in. pipe size. Made by **Worthington Corp.**, 427 Worthington Ave., Harrison, N. J.

For more details circle NED-636 C7 on enclosed inquiry slip

DRILLING ATTACHMENT
for automatic screw machines



Precision collet is used in the Jemco Drill-Tru drilling attachment to hold drills from 0.004 to 0.1969-in. It is adaptable to all standard conventional drives and is available for Brown & Sharpe No. 00, 0 and 2 automatic screw machines using turret driving attachments. The concentrically-held collets eliminate drill whipping and minimize drill breakage. Adjustable drill stop screw makes possible accurate drill length adjustments. Collets are available in metric, decimal, fractional and number sizes. Made by **Jersey Mfg. Co.**, 444 Livingston St., Elizabeth 1, N. J.

For more details circle NED-637 C7 on enclosed inquiry slip

TINSLEY THICKNESS GAUGE

DUAL-SCALE

A simple and inexpensive gauge for measuring the thickness of non-magnetic coatings such as paints or plating on ferrous bases.

FEATURES

- Easy to use and carry
- Will determine thickness on radii (irregular or curved surfaces present no problem)
- Not affected by vibration and temperature—special Alcomax magnet used
- Negligible error, if any, if used in vertical upside down position, or horizontally
- Will not damage coatings
- An additional scale for special calibrations is on the reverse side of each gauge.

Range: 0.0002 to 0.015 inches (or 0-400 microns)

Mean Accuracy: ± 15% or 0.0001 inch whichever is greater.

Write for BULLETIN 28P1-D

B-606

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-638 C7 on enclosed inquiry slip

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Square D's *NEW* **TYPE A TIMER**

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FOR APPLICATIONS requiring timing periods up to 3 minutes, maximum accuracy and 1 or 2 instantaneous interlocks ...specify Square D's Type B, machine tool standard for more than 20 years!

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Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

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For more details circle NED-639 C7 on enclosed inquiry slip

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Extreme pressure or boundary lubrication, without the participation of solid lubricants, is practically impossible.

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THE ALPHA MOLYKOTE CORP.

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71 Arnulfstrasse, Munich 19, Germany

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Special Chromalox features solve 3 spot heating problems

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Cut costs—Eliminate messy, sticky, leaky, ball pots, fountain brushes and rollers...

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Handy aerosol spray container is always ready to use. Nothing to load. No spilling. No brushes to clean. No drying out. Covers quickly. Saves time. Very economical.

9 COLORS. For stenciling cartons, crates, boxes, steel drums, color coding metals and other materials, or any other stenciling on steel, wood, fiber, canvas, glass or other surfaces.

A trial will convince you. *Write for full details!*

Ask us also about Reynolds Stencil Kover, the very opaque, fast covering blockout fluid. Tan colored to match corrugated cartons. Completely blocks out old stenciling, labels, printing, crayon or painted markings, etc. Dries quickly. Permits re-marking and re-shipment in original carton; —re-stenciling of left over cartons;—or correcting stenciling errors. Packaged in a handy 12 oz. aerosol container.

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4504 Euclid Avenue • Cleveland 3, Ohio

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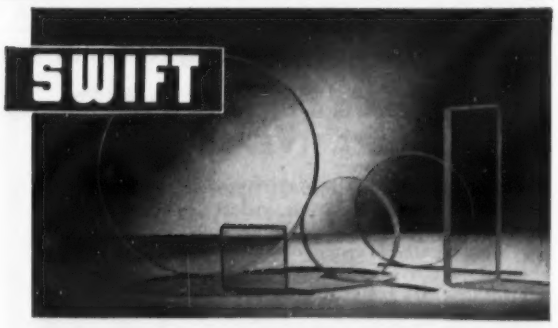

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We can supply perfectly true circles, precision-ground from heat-resistant polished plate glass. Used by chemical companies from coast to coast —resist clouding, pitting, chemicals (except HF and strong hot caustic solutions).

Squares, rectangles or odd shapes in 8 thicknesses (⅛" to 1"), sizes up to 24" x 60", also available for immediate shipment. Write, wire or phone for bulletin or quotation.

SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC.
5 Glass St., Elmira, N.Y.

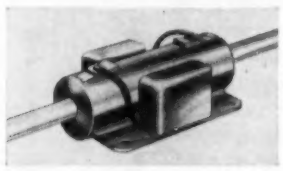
▲ For more details circle NED-643 C7 on enclosed inquiry slip ▲

LIQUIFIED GAS TORCH
has 2700° F flame temperature

This Prepo liquified gas torch develops flame temperature of 2700° F, just 300° short of the heat needed for welding. Burner incorporates a preheating device that raises the temperature of the gas to 1000° F before it enters the combustion chamber. Normal cooling effect of expanding gas is thus reversed. Superheater tube channels the gas to and around the hot mouth of the combustion chamber before it is ignited. Torch heat is such that it will actually melt away one end of a paper clip before the other end becomes too hot to hold. Made by **Prepo Corp.**, Dept. NED, 108½ W. Fulton, Edgerton, Wis.

▲ For more details circle NED-644 C7 on enclosed inquiry slip ▲

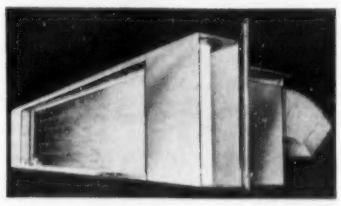
ULTRASONIC FLOWMETER
offers no obstruction to fluid flow



Accurate flow rate measurement by an ultrasonic beam is made by the Glennite model UF-100 flowmeter. The straight-through instrument offers no obstruction to fluid flow, eliminating pressure drop and simplifying maintenance. It measures kerosene, liquid oxygen, water and similar low viscosity liquids in 1000 to 4000-gpm range. Accuracy exceeds 99 per cent. Instrument provides 5-v full scale output to feed into standard telemetering and recording systems. Made by **Gulton Industries, Inc.**, 210 Durham Ave., Metuchen, N. J.

▲ For more details circle NED-645 C7 on enclosed inquiry slip ▲

AUTOMATIC AIR FILTER
in heaters, ventilators and air conditioners uses glass fiber media



Automatic air filtration, with need for servicing only once a year, is provided in Roll-O-Vent line of industrial unit heaters, heating and ventilating units, and air conditioners. All use a viscosine impregnated, plastic bonded continuous glass fiber curtain that moves horizontally through the entering air stream just ahead of the coils and fan sections. Fresh filter media is periodically supplied under timed control, and contaminated media is disposed of automatically. Under normal operation, spool of dirty media is replaced only once a year by spool of clean media.

Basic Roll-O-Vent unit consists of fan section, coils and automatic filter. Standard and nonfreeze steam coils are available in variety of sizes and capacities. Available accessories to adapt the units to field conditions include mixing dampers, face and by-pass dampers, intake dampers and humidifiers. Made by **American Air Filter Co.**, 391 Central Ave., Louisville 8, Ky.

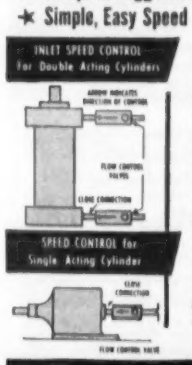
▲ For more details circle NED-646 C7 on enclosed inquiry slip ▲

MULTIPLE COLUMN AIR GAGE
checks close tolerance surfaces

Accurate and simultaneous measurement of up to eight separate dimensions is possible with line of multiple-column air gages having 0.5-second response. Line can include instruments with any number of columns required for a given application if standard two to eight-column units are not satisfactory. Purchaser can fabricate his own gaging fixtures, or they can be supplied with the gages. Featured are self-cleaning pressure system, complete linearity over the full scale, interchangeable component parts, two-step amplification conversion and zero-centered scale which permits tolerances to be read as plus and minus from nominal dimensions. Made by **Dearborn Gage Co.**, Air Gage Div., Dept. D, 22038 Beech St., Dearborn, Mich.

▲ For more details circle NED-647 C7 on enclosed inquiry slip ▲

★ Accurate, Constant Cylinder Speed Control
★ Compact Rugged Design
★ Simple, Easy Speed Selection ★ For Air, Oil or Water Applications



Pneu-Trol Speed Control Valves, are widely used in hundreds of control applications because they combine in a short, compact body, a tapered fine thread needle for extremely accurate air or oil flow control and a floating retro ball check, which permits full flow in the opposite direction. Retro ball floats in most sensitive position to its seat, requiring only a slight differential pressure to fully open or close it.

Needle design permits maximum flow capacity in the controlled direction. Metal to metal needle and ball seats insure long trouble-free service. Simple, practical "O" gland structure eliminates troublesome leaking. Valve bodies machined from hex brass or aluminum for 2000 psi working pressures; steel and stainless steel for 5000 psi. Made in 5 female pipe sizes—⅛" to ¾". ATTRACTIVE PRICES . . . IMMEDIATE DELIVERY.

Write for illustrated circular and prices.

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1432 N. KEATING AVENUE · CHICAGO 51, ILL.

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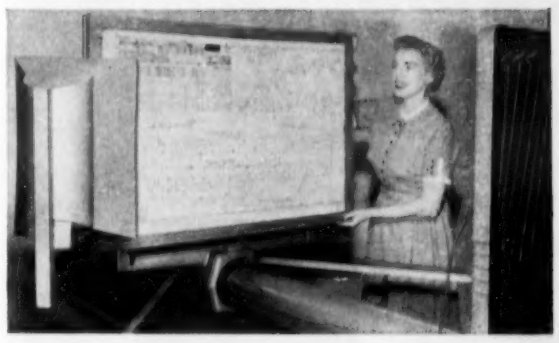
XEROX® Model 1218 COPYING EQUIPMENT
SPEEDS COPIES OF ENGINEERING DRAWINGS
CUTS DUPLICATING COSTS



Copies engineering drawings or anything written, typed, printed or drawn up to 24" x 36", by xerography onto offset paper masters for runoff of 12" x 18" multiple copies on offset duplicator . . .

Using xerography and offset duplicating, one hundred copies of engineering drawing, reduced from 24" x 36" to 12" x 18" can be produced in about five minutes. Copies are sharp with details of the original clearly readable on the reduced size.

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A study by the Ford Motor Company indicates a production cost of 97c for one hundred 12" x 18" copies.

Xerography is a dry, electrostatic, copying process requiring no intermediate negative. No sensitized papers, water or liquid chemicals are used.

WRITE for case histories showing how companies of all kinds, large and small, are cutting duplicating costs and speeding paperwork with xerography.

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XEROGRAPHY
THE FASTEST, CHEAPEST, MOST VERSATILE WAY TO MAKE MASTERS FOR DUPLICATING.

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For use wherever threaded connections are subjected up to 1800°F. temperatures such as boiler, manhole, face plate studs, cylinder heads, and manifold studs or flange bolts on high temp steam lines and pumps.

Try C-5 and see why manufacturers, refiners and power producers have made it a part of their regular preventative maintenance program.

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C-5's exclusive colloidal copper formula separates mating metal threads and surfaces with cushioning, protective copper plating. C-5 prevents galvanic action and eliminates pitting even when dissimilar metals join. On mating metal surfaces, C-5 saves gaskets and countless man hours.

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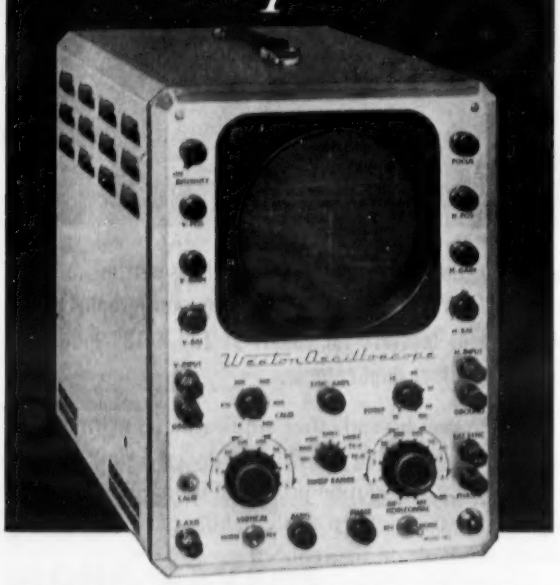
in
all-purpose scopes



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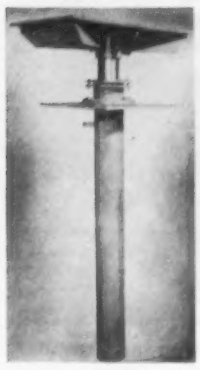
- identical vertical and horizontal amplifiers, D-C and A-C coupled.
- 4.5 mc band width (for color)
- 15 mv sensitivity
- normal or flat faced tubes (high intensity)
- Z-axis modulation
- 3X horizontal sweep expansion
- identical phase shift to 1 mc—can be adjusted up to 6 mc
- etched circuit construction
- ease of calibration
- polarity reversal switch
- only **$395.50** (with flat faced tube $430.50)

WESTON Oscilloscopes, and other Weston test equipment, are available through local distributors. For complete information, write Weston Electrical Instrument Corp., Newark 12, N. J.—A subsidiary of Daystrom, Incorporated.

WESTON *Instruments*

▲ For more details circle **NED-651 C7** on enclosed inquiry slip ▲

STATIONARY PLATFORM LIFT
in 1000 to 20,000-lb capacities



Floor level Hydro-Lift is practical for plants without loading docks as boxes or skids can be raised or lowered to truck heights for easy transfer. Installation requires a shallow pit. Lift has all-steel construction with bronze bearings in all moving parts. Pumping unit can be furnished with single or three-phase motor. Controller switch will raise, lower or hold load to any position. Either circular or square platforms up to 12 x 16 ft can be furnished. Capacities range from 1000 to 20,000 lb, and strokes range from 36 in. upward. Lift speed is 1 ips, although special units with 1-fps speed are available. Made by **Hydro-Lift Co.,** Dept. NED, 13000 S. Halsted St., Chicago 28, Ill.

▲ For more details circle **NED-652 C7** on enclosed inquiry slip ▲

GRAVITY FEED OILERS
flood bearings when opened

Dry starts of shutdown machinery are eliminated by the Kwik-Flush gravity feed oilers which automatically flood bearings with a fixed amount of lubricant the instant the oiler valve is opened. Following this flushing cycle, it functions in its normal manner, feeding lubricant drop by drop at any required rate. Available are 10-oz, 1-pt, 1-qt and 2½-qt units with heat resisting Pyrex or shatterproof Lucite reservoirs and manual or electric solenoid shut-off valves. Made by **Trico Fuse Mfg. Co.,** 2948 N. Fifth St., Milwaukee 12, Wis.

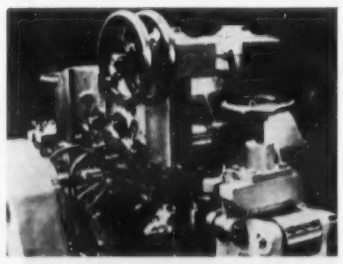
▲ For more details circle **NED-653 C7** on enclosed inquiry slip ▲

HARDNESS TESTER
rocker type for painted surfaces

Pendulum-like rocker oscillating over surface being tested constitutes the basic principle on which this ICI automatic Sward hardness tester operates. Unit is designed for accurately measuring the hardness of painted surfaces. The harder the surface is, the more the rocker oscillates in a given interval. Automatic counting takes place as shutter on rocker interrupts light beam focused on phototube in counting circuit. Basis of counter circuit is the Sigma model 1 CdS photorelay which operates on 115 v ac. Readings have square deviation better than 1.0 per cent of average, compared to 5 per cent when counting is done visually. Made by **Gardner Laboratory, Inc.,** 4724 Elm St., Bethesda 14, Md.

▲ For more details circle **NED-654 C7** on enclosed inquiry slip ▲

REVERSING CLUSTER MILL
rolls work-hardening metals to 0.010 to 0.0001-in. thickness



This narrow-width reversing cluster mill can produce ultra-thin strip from 0.010 to 0.0001-in. finishing thickness. It will handle such metals as 18-8 stainless steel, high-temperature alloys, silicon steel, molybdenum, beryllium, copper, platinum alloys, nickel-iron alloys and similar magnetic materials. Several sizes offered employ work rolls measuring 7/16 x 4, ¼ x 4 and 5/32 x 3 in. Mill drive can be applied to work rolls, intermediate rolls or backup rolls.

Machine is normally powered by variable voltage direct current drive, arranged for constant tension winding. Variable speed range up to 100 fpm and a coil build-up range from 6 in. ID to 12 in. OD is provided. Tension range as high as 1000:1 is obtainable. Backup rolls have heavy-duty antifriction roll neck bearings which allow high rolling pressures. Made by **Loma Machine Mfg. Co.,** Dept. NED, 114 E. 32nd St., New York 16, N. Y.

▲ For more details circle **NED-655 C7** on enclosed inquiry slip ▲

The Metron 3 in 1 HAND TACHOMETER . . .

The most **CONVENIENT**
most **ACCURATE**
most **READABLE**

WAY TO MEASURE SPEEDS OF YOUR MACHINES

3 sliding-scale ranges in 1 instrument!

It's more *readable*—you see only one set of scale numbers at a time. It's more *dependable*—has a simpler operating principle. You switch quickly to any of 3 "sliding scale" ranges. You cannot damage by overspeeding. You get steady readings—electric cable prevents instrument vibration.

For full details write for bulletin 103

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436 Lincoln St., Denver 3, Colo.
DISTRICT OFFICES • NEW YORK • CHICAGO • CLEVELAND

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AIR OR HYDRAULIC
ANY MOUNT
ANY STROKE
ANY BORE SIZE

Get your cylinders *now.* No need to lose production! Carter will *ship your cylinder order in 24 hours or less,* to satisfy your needs. And when you buy Carter cylinders, you buy quality—rugged, dependable cylinders.

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ROTARY ACTUATORS • SPECIAL CONTROLS

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For reducing finishing costs . . .
try JEWEL BRAND ABRASIVE BELTS

THE UNIFORMLY-HIGH QUALITY of JEWEL BRAND Abrasive Belts saves time, reduces operator fatigue and results in lower finishing costs. It is obtained through a simple system of continuous quality control made effective by the attitude and skill of veteran workers. All JEWEL BRAND belts feature the unique velvet joint . . . longer lasting according to performance records.

JEWEL BRAND belts are available in the precise size and grit to meet every grinding, finishing or polishing need. For details, write ABRASIVE PRODUCTS, INC., 525 Pearl St., South Braintree 85, Mass.

JEWEL BRAND *coated* **ABRASIVES**

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No "Creeping Rust" with Penco's PHOSPHATE BASE

Because an extra step in the finishing cycle puts a phosphate coating on every product—Steel Shelving, Lockers, Cabinets—your Penco equipment is protected against the rust that can spread underneath enamel from scratches and rubs that expose metal. Write for Catalogs NE-57-1

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ALAN WOOD STEEL COMPANY
Orenon Ave. & Swanson St. • Philadelphia 48, Penna.

For more details circle NED-660 C7 on enclosed inquiry slip

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- DUST COLLECTORS
- SPRAY BOOTHS
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SPRAY BOOTHS

Newcomb Spray Booths are adaptable to manual, automatic, and electrostatic spray operations—floor or overhead conveying. Designed for minimum maintenance. Individual tanks or central sludge systems. Automatic sludge recovery systems.

Dip coating and Flow coating systems complete with ventilated drip areas and complete fire protection.

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J & H Submersible Motor

meets diverse pumping conditions

- Operates in water. Can be easily modified to operate in gasoline, crude oil and many other fluids.
- Flexible length/diameter ratio to fit casing, tank, pipeline or pump-motor condition you specify.
- Long service life, low maintenance.
- Horsepower ratings from ½ thru 5 hp at 3450 rpm.

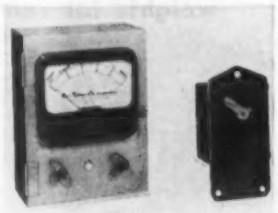
Send for Data!

For motor data, write on your company letterhead to: Jack & Heintz, Inc., 17629 Broadway, Cleveland 1, Ohio.

JACK & HEINTZ

For more details circle NED-662 C7 on enclosed inquiry slip

REMOTE CONTROL
for positioning and indicating



Valve, damper or any device using an Au-Temp-Co reversing motor as an operator can be remotely controlled and position is indicated on meter of this remote pushbutton control. Direction of travel can be reversed immediately. Meter scale can be calibrated to any type of operation and will indicate power failure. Control consists of panel with indicating meter and push-button switches, and potentiometer unit mounted on motor being controlled. Control circuit is 24 v, while primary can be 115 or 220 v. Made by **Au-Temp-Co.,** Dept. NED, 657 Broadway, New York 12, N. Y.

For more details circle NED-663 C7 on enclosed inquiry slip

VOLT-AMMETER
snap-around type has rotary scale

Recessed range selector built into the snap-around RS-1 Amprobe volt-ammeter permits selection of any one of four ampere and two volt ranges. Rotary scale multirange instrument has a magnifying glass-covered dial, bayonet voltage leads, printed circuit construction, shielded core magnet movement and Pointer-Lock to lock the needle in place when taking a reading in a difficult location. Current is measured without cutting conductors. Made by **Pyramid Instrument Corp.,** Dept. NED, 630 Merrick Rd., Lynbrook, N. Y.

For more details circle NED-664 C7 on enclosed inquiry slip

MOISTURE BARRIER SACK
features aluminum foil layer

Protection against moisture, odor and gases is provided for products packaged in this Foil-Wall multi-wall sack. Standard sack has a 0.00035-in. aluminum foil laminated to 40-lb kraft positioned between the inner and outer plies. Rate of moisture vapor transmission is so slight as to be almost impossible to measure. Other constructions included polyethylene extruded on foil, foil laminated by polyethylene to kraft and bags with foil in various ply positions. Photo shows bag undergoing shower test. Made by **Hudson Pulp & Paper Corp.,** Dept. NE, 477 Madison Ave., New York 22, N. Y.

For more details circle NED-665 C7 on enclosed inquiry slip

WHAM and there goes spindle accuracy

Our illustrated "character" is about to ruin spindle accuracy with a hammer and drift key that cost a lot of money to get in the first place. Modern P.D.Q. tooling can eliminate this abuse . . . and save time and money as well. A quick one-sixth turn of the holder nut releases the adapter and you're ready for the next operation . . . it's as easy as that. How about those machine tools in *your* plant? Get the facts on P.D.Q. tooling . . . Write for complete information.

Representatives in principal cities.

PORTAGE Double-Quick, Inc.
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OTC REPLACE 42 SIZES WITH THESE TWO

NEW GIANT ALLOY adjustable wrenches

THINNER-LIGHTER-STRONGER

Until now 42 fixed size wrenches were needed to handle jobs done by these two *"Slim-Twin"* adjustable wrenches. Slim to permit easy access to tough jobs. Lightweight sturdy, high quality alloy steel for dependable service.

OA24-24" long, ⅞" thick with two jaws. Provides adjustments from 1⅝" to 2⅞" in ⅛" graduations. Extra jaw permits adjustments from 1 1/16" to 2 11/16" in 1/16" graduations. Weight, only 10 lbs.

OA36-36" long, 1⅛" thick. Adjusts from 2 11/16" to 4¼" in ⅛" graduations. Weight, only 22 lbs.

Save time and money with OTC "Slim-Twins"
WRITE FOR FREE BOOKLET

OWATONNA TOOL CO.
436 CEDAR ST., OWATONNA, MINNESOTA

For more details circle NED-667 C7 on enclosed inquiry slip

STOP "LOST MOTION" WITH Cordomatic® ELECTRIC BALANCE REELS

A Cordomatic First! Completely electrical Balance Reel does away with separate wire cable to suspend tool.

Twist-Lock connector permits multiple tool use. Models also available without connector for direct wiring.

Tension can be safely and easily adjusted by hand for various tools and working ranges. Special Tension Knob *can't spin . . . can't slip . . . can't injure fingers!*

Cordomatic Balance Reels are also available with nylon-covered steel cables.

A complete line of Cordomatic Reel Products is available from your local distributor.

For further information write

Cordomatic® Dept. X
17th & Indiana Ave. • Phila. 32, Pa.

For more details circle NED-668 C7 on enclosed inquiry slip

How to get the **MOST** for your **MONEY** in power transmission

Ask for FREE Bulletin 521

The low cost service to be expected from Cleveland Worm Gear Speed Reducers is discussed in this new bulletin. Illustrated with photographs.

Clevelands are available in many standard types and sizes. Sizes range from fractional hp to over 300 hp, ratios to 10,000 to 1, center distances to 21.837". Special designs and larger sizes produced to individual requirements.

THE CLEVELAND WORM & GEAR COMPANY
3283 East 80th Street • Cleveland 4, Ohio
Sales Representatives in all major industrial markets

For more details circle NED-669 C7 on enclosed inquiry slip

Exclusive Design for extra safety

HOOD GAUNTLET

This all-purpose neoprene-coated industrial gauntlet has reinforced 6" cuff *with anti-rip binding* for complete forearm protection. Fully curved fingers for proper fit and flexibility. No bunching on palm—no binding on back. *Reinforced thumb crotch* for extra wear. Industrial weight, 14½" over-all.

Write today for free Hood Glove Guide—shows you how to choose the RIGHT glove for EACH job.

HOOD RUBBER CO.,
a division of the B. F. Goodrich Company
WATERTOWN, MASS.

RUBBER • NEOPRENE • PLASTIC COATED INDUSTRIAL GLOVES

For more details circle NED-670 C7 on enclosed inquiry slip

PORTABLE POWER THREADING

Ready to go-- wherever you go

TOLEDO No. 78 Power Drive—with wrenchless chuck, forward and reverse rotation, ⅛ to 2" capacity—a real work-saver.

TOLEDO Drop Head Ratchet Threader—die change in a jiffy, ⅛ to 2" sizes, light, convenient for close work, replaceable dies.

Take the toil out of threading . . . this chuck locks pipe or conduit in place—with one finger tightening. Just put the pipe in the wrenchless chuck, "finger" tighten, turn the switch and you're ready to go. Team the No. 78 with a TOLEDO Drop Head Threader and your threading jobs are turned out in seconds. See these TOLEDO-quality products at your supplier's today! Send for complete information.

BUILDERS OF THE WORLD'S FINEST PIPE TOOLS
TOLEDO
PIPE THREADERS • PIPE WRENCHES • PIPE MACHINES

THREADED PIPE

THE TOLEDO PIPE THREADING MACHINE CO.
TOLEDO 4, OHIO

For more details circle NED-671 C7 on enclosed inquiry slip

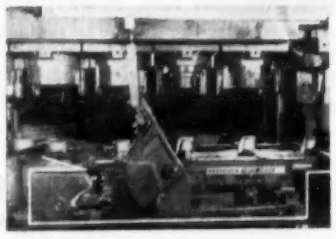
WEIGHT DATA SYSTEM originates, transmits and computes weights for remote recording

Weighing system pictured originates, transmits and computes weights for remote recording in an industrial shipping and building setup. Scale determines gross shipping weights and transmits it in digital form to tabulator card punch. Electronic computer subtracts tare from gross weight and multiplies result by a factor to secure final billing figure. This figure is transmitted to card punch. Finally, factored weight is also transmitted to an electric listing and adding unit as a production record.

Direct digital scanner transforms weight indications of dial into digital signal that can be recorded on a card punch, tape punch, electric adding machine, electric typewriter or other recording device. Although photo shows all units closely grouped, recording units can be in any remote location desired by user. System developed by **Toledo Scale Co.**, Telegraph Rd., Toledo 1, O.

For more details circle NED-672 C7 on enclosed inquiry slip

PRESS TRANSFER UNIT used to automate standard presses for handling progressive operations



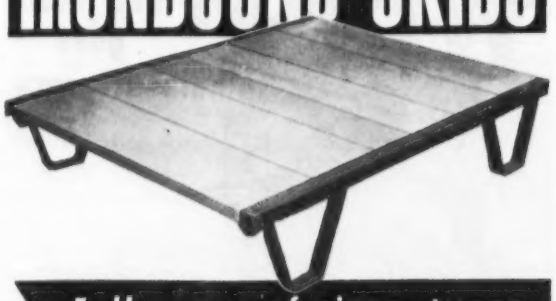
Any standard press can be converted into an automated unit capable of handling a number of progressive operations and a broad range of sizes by addition of the Press Pacer, a portable mechanical transfer unit. It transfers stampings from one die station to the next on each stroke of the ram and can also transfer parts between presses. Parts can be moved through such die operations as blank, draw, pierce and trim simultaneously.

Unit is adjustable for different spacings between dies and different ram strokes and can be installed to run either from front to back or left to right when bolted to the press bed.

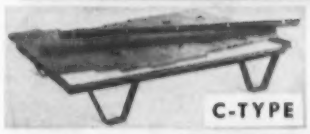
Minimum size press which accommodates the standard model has a 42 x 72-in. bed area and 14-in. shut height. Stroke adjustment is up to 12 in., and transfer distance is adjustable to any increment in an 8 to 36-in. range. Transfer motion is obtained by means of a lever arm bolted to the ram. Pickup fingers are easily changed to accommodate different size parts. Made by **Sheffield Corp.**, Contract Services Div., 721 Springfield St., Dayton 1, O.

For more details circle NED-673 C7 on enclosed inquiry slip

IRONBOUND SKIDS



Full range of sizes, types, capacities, underclearances!



Bolted and welded construction of C-type skids feature easy deckboard replacement.

Ironbound — **IRONBOUND**
55 Hoffman Place • Hillside, N. J.

For more details circle NED-674 C7 on enclosed inquiry slip

NOTHING ELSE gives the same protection as a FUSE

and no other fuse protects just the same way as

ECON® dual-element fuses ELIMINATE NEEDLESS BLOWS

Other devices used to guard your motors or branch circuits do not take the place of fuses. Also in order to get the fullest, surest, best protection, it is advisable to use ECON Dual-Element Fuses, which offer this double protection:

1 Time-controlled protection against unnecessary blowouts from temporary and harmless overloads.

2 Instantaneous protection against short circuits.

Only Econ Fuses have the Econ-Alloy thermo element.

At leading electrical wholesalers in knife and ferrule types: 0 to 600 Amp., 250 to 600 V. Underwriters' Laboratories approved.

1306EER

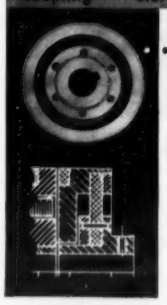
ECONOMY fuses for every purpose

..AFG. CO., 2717 Greenview Ave., Chicago 14, Ill.

For more details circle NED-675 C7 on enclosed inquiry slip

introducing . . .

Simplatrol
MINIATURE AND SMALL ELECTRIC CLUTCHES & BRAKES
Diameters ⅞" to 3⅛", lengths 1⅞" to 5¼"



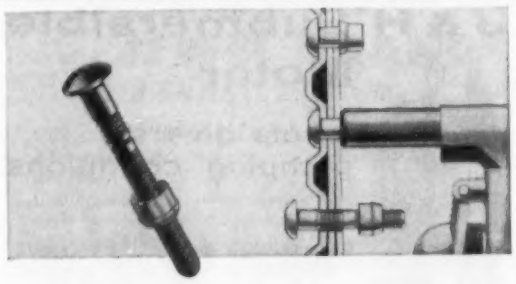
..The Diaphragm Makes the Difference!

Simplatrol Miniature and Small Electric Clutches and Brakes feature a specially patented diaphragm which is the only moving part in actuation of the clutch or brake. This "heart" of the Simplatrol clutch or brake is good for years of use under the toughest conditions and reduces troublesome magnetization of surrounding parts. Installation of Simplatrol Electric Clutches and Brakes Immediately Upgrades Machines You Make or Use—Gives You Precise As Well As Faster Sequence Operations. Greatly Extends All Functions Of Automatic Control.

Ask for recommendations on Simplatrol units. New illustrated folder on request.

Simplatrol products corp.
24 SALISBURY STREET
WORCESTER, MASS.
Representatives in Key Industrial Areas

For more details circle NED-676 C7 on enclosed inquiry slip



Quick as a Wink—You Get Secure, Permanent Fastening With Townsend Lockbolts

In less than a second, with one squeeze of the trigger, a Townsend lockbolt pulls the work together with a high clinching action, is locked in place with uniform pressure. It is a quick method of producing tight, rigid, permanent fastenings that cannot loosen even under extreme vibration or shock conditions.

Townsend lockbolts combine the advantages of riveting and bolting—eliminate the disadvantages. Installation is fast—under certain conditions, one man will install 30 in only 60 seconds. Fewer workers will complete an assembly in less time than when riveting or bolting.

Townsend lockbolts are available in steel and aluminum alloy, in 3/16", ¼", 5/16" and ⅜" diameters, in grip lengths ranging up to 2", in various head styles. Write for bulletin TL-101.

Licensed under Huck patent nos. RE 22,792; 2,114,493; 2,527,307; 2,531,048; 2,531,049; 2,754,703

Townsend Company
P.O. BOX 237-G • NEW BRIGHTON, PENNSYLVANIA

For more details circle NED-677 C7 on enclosed inquiry slip

FOUR POSITION DRILLING & TAPPING TURRET HEAD

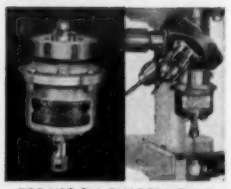
FITS ALMOST ANY DRILL PRESS

No need to set up for each operation. A simple rotation of this turret head brings any of four drills or cutting tools into position. Speeds production—cuts cost! Specify size and make of drill press when ordering QUADRILL.

For Fast Accurate Tapping Operations

use the **quadtapper**

You get precision tapping at high speed by simply attaching the QUADTAPPER to any of the four spindles of the QUADRILL. Write today for complete information on both these production tools.



FOR USE ON QUADRILL ONLY

CHICAGO QUADRILL *Company*

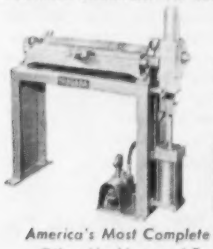
1856 BUSSE HIGHWAY • DES PLAINES, ILL.

▲ For more details circle NED-678 C7 on enclosed inquiry slip ▲

NIAGARA ADJUSTABLE BAR FOLDERS

Just slide the sheet between the folding blade and the jaw . . . and pull the handle forward. Clamping and folding are practically simultaneous. Niagara Adjustable Bar Folders are fast, versatile and rugged. Easily and quickly adjustable to desired angle of bend, width of fold and thickness of material, they're ideal for producing narrow, sharp, close and *accurate* folds, like those for lock seams. Four sizes are available for handling lengths from 21" to 42".

GET ALL OF THE FACTS on the many unique features of this profit-maker, as well as the complete Niagara line of hand and power operated folders and brakes. Write for new, illustrated Bulletin 74 today.



AIR ACTUATED MODELS, TOO!
Perfect answer for faster production of narrow width work. Available in three sizes for lengths of 30" to 42".

NIAGARA

America's Most Complete Line of Presses, Shears, Press Brakes, Other Machines and Tools for Plate and Sheet Metal Work.

NIAGARA MACHINE & TOOL WORKS, BUFFALO 11, N.Y.

DISTRICT OFFICES

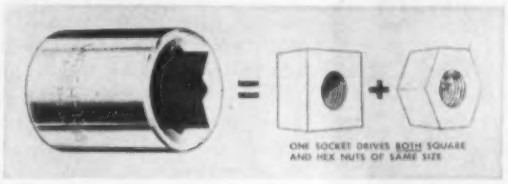
Buffalo • Cleveland • Detroit • Indianapolis • New York • Philadelphia

Distributors in principal U. S. cities and major foreign countries

▲ For more details circle NED-679 C7 on enclosed inquiry slip ▲

SQUARE & HEX NUT SOCKET
dual type for socket wrench use

This Ten Point dual purpose socket can be used on hex and square nuts interchangeably. Sockets are hot forged chrome alloy steel with a chrome plated



finish. Presently available is ½-in. square drive size, but ¼, ⅜, ¾ and 1-in. drives will be available shortly. All fit on any standard ratchet wrench of the right drive size. Made by **Wright Tool & Forge Co.**, E. State & Wright Aves., Barberton, O.

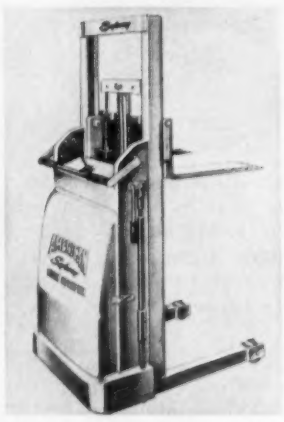
▲ For more details circle NED-680 C7 on enclosed inquiry slip ▲

CARTRIDGE HEATERS
2½ to 24-in., 100 to 2000-w sizes

Brass sheathed electric cartridge heaters are suited for use in vending and extrusion machines, branding irons and other devices requiring a spot of heat. They are rated at 35 w per sq in. Diameters available are ½-in. in 2½ to 8-in. lengths; ⅝-in. in 2½ to 16-in. lengths; ¾ and 1 in. in 3 to 20-in. lengths; and 1¼ in. in 4 to 24-in. lengths. Wattages vary from 100 w in smaller sizes to 2000 w. Diameters below 1 in. have 10-in. flexible leads, while 1-in. and larger sizes have ½-in. 8-32 threaded solid stud terminals. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle NED-681 C7 on enclosed inquiry slip ▲

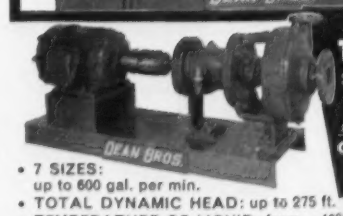
PORTABLE ELEVATING TRUCKS
lift, stack up to 1500-lb loads



Lifting, stacking or positioning jobs involving loads up to 1500 lb are efficiently performed by Safeway portable elevating trucks. Stable when loaded, yet extremely mobile, trucks feature battery-operated hydraulic system, actuated by finger-touch control lever. Heavy-duty steel forks are adjustable from 9½ to 21 in. center distance. Trucks have 5-in. rear swivel wheels and 4-in. fixed front wheels, floor brakes and self-contained trickle battery charger. Line includes drum stackers and straddle models as well as fork and platform elevating unit. Lifts range up to 96 in. Made by **American Pulley Co.**, 4245 Wissahickon Ave., Philadelphia 29, Pa.

▲ For more details circle NED-682 C7 on enclosed inquiry slip ▲

Easy to "get at" For Inspection and Service without Disconnecting the Piping



TYPE "GS" Standard Centrifugal Pumps for . . . GENERAL SERVICE CHEMICAL SERVICE

- 7 SIZES: up to 600 gal. per min.
- TOTAL DYNAMIC HEAD: up to 275 ft.
- TEMPERATURE OF LIQUID: from −40°F to +350°F.
- Available from stock in ALL IRON, BRONZE FITTED, or STAINLESS STEEL Construction.

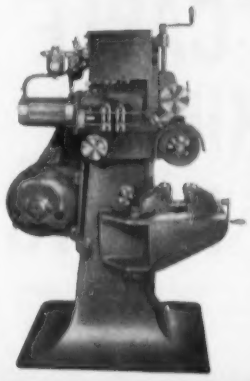
Write for descriptive Circular No. 190 or our recommendations for your specific pump applications.

DEAN BROTHERS PUMPS INC.
EST. 1869
323 West 10th St., Indianapolis 7, Ind.

▲ For more details circle NED-683 C7 on enclosed inquiry slip ▲

NOW! CUT UP TO 1,000 PIECES OF PIPE PER HOUR

Continental **PIPE & TUBE CUT-OFF MACHINES**



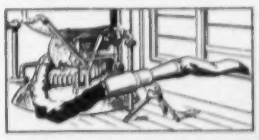
Cut Pipes and Tubes faster with Continental High Speed Cut-Off Machines. Lowest maintenance means less cost to you. ⅜" to 12¾" O.D. capacities, hand or automatic air-operated bench and floor models. *Request free catalog.*

Continental **MACHINE CO.**
SINCE 1919
1952 N. MAUD AVE. • CHICAGO 14, ILL.

▲ For more details circle NED-684 C7 on enclosed inquiry slip ▲

Ventilate CONFINED Places with Vano Design "C" Ventilator-Exhauster

WELDING FUMES are here removed by this Vano Ventilator-Exhauster.



FUMES FROM A REACTOR KETTLE are here withdrawn by tripod-mounted Vano Ventilator-Exhauster. Note non-collapsible suction tubing and discharge tubing.

Ideal for withdrawing welding fumes from confined places or directly from the welding rod. Provides greater safety, greater comfort for workers . . . leads to greater work efficiency. Can be furnished with 8" suction inlet to which 8" non-collapsible suction tubing may be attached . . . or provided with multiple inlet nozzles for 5", 4" and 3" suction hose.

Other types are also available for supplying fresh air to men working in confined places, such as tanks, manholes, drums, boilers and ship-holds.

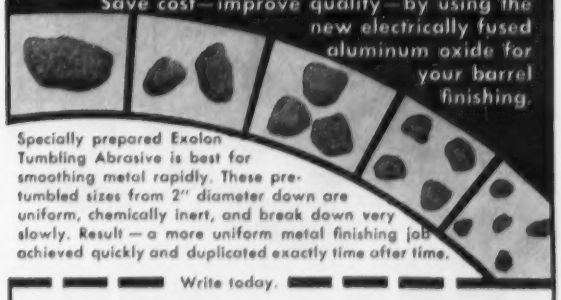
For full details on Coppus Vano Design "C" Ventilator-Exhauster write COPPUS ENGINEERING CORPORATION, 403 Park Avenue, Worcester 2, Mass.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

▲ For more details circle NED-685 C7 on enclosed inquiry slip ▲

LOW COST Barrel Finishing with EXOLON

Save cost—improve quality—by using the new electrically fused aluminum oxide for your barrel finishing.



Specially prepared Exolon Tumbling Abrasive is best for smoothing metal rapidly. These pre-tumbled sizes from 2" diameter down are uniform, chemically inert, and break down very slowly. Result — a more uniform metal finishing job achieved quickly and duplicated exactly time after time.

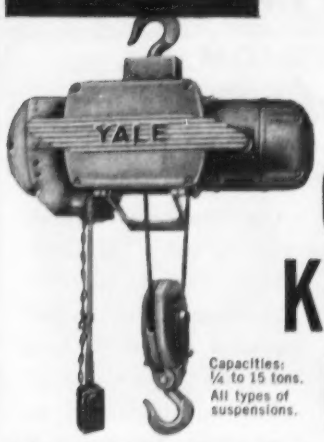
Write today.

Gentlemen: Please send
☐ Your Folder, EXOLON BARREL FINISHING ABRASIVE.
☐ Your Recommendations for the following finishing problem
.....
Name .....
Address .....
Company .....
City .....

The EXOLON Company
986 East Niagara Street Tonawanda, New York

▲ For more details circle NED-686 C7 on enclosed inquiry slip ▲

YALE



air-cooled

CABLE KING HOISTS

Capacities: ¼ to 15 tons. All types of suspensions.

Yale Air-Cooling System circulates cool air around motor brake and gear housing...eliminates the need for "cool-off" time. Exclusive Yale positive lubrication prevents overheating of load braking surfaces. Pushbutton control makes accurate load spotting easy. Select Yale Cable Kings for continuous, heavy-duty lifting operations. They stay on the job! For full facts, write The Yale & Towne Mfg. Co., Philadelphia 15, Pa. Dept. 373.

YALE* INDUSTRIAL LIFT TRUCKS AND HOISTS

*REG. U. S. PAT. OFF.

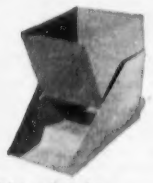
▲ For more details circle NED-687 C7 on enclosed inquiry slip ▲

THIS SMALL PARTS ASSEMBLY FEEDER

SPEEDS ASSEMBLY

INCREASES PRODUCTION

IMPROVES METHODS



THE NEW LOW COST

NESTIER®

MODEL 'M'

(Pat. Pending)

Write today for Bulletin M-349

Cut costs with "methods-engineered" Model 'M' feeders . . . the durable units which can be used in any assembly operation. Feeder boxes can be suspended from rack or will stack on each other, making use of rack optional . . . "stepped" insert in bottom effectively controls rate of parts flow to withdrawal area . . . feeder lip designed for most efficient parts withdrawal.

C-346-DN

NESTIER®

The Chas. Wm. Doepke Mfg. Co., Inc.
8884 Blue Ash Rd. • Rossmoyne, Ohio

▲ For more details circle NED-688 C7 on enclosed inquiry slip ▲

SEALMASTER BEARING UNITS
turning point for production!

SEALMASTER Ball Bearing Units are the answer to industry's quest for high speed and precision in production. In daily operation throughout the industrial field, SEALMASTER Bearing Units keep production on the move, reduce maintenance and "down-time" and give their users carefree bearing service.

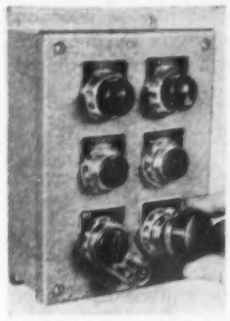
See your Sealmaster Distributor or write for Bulletin 454

SEALMASTER

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS

▲ For more details circle NED-689 C7 on enclosed inquiry slip ▲

OIL TIGHT PUSHBUTTONS
rated to 550 v ac-dc



Accessibility to wiring and flexibility have been designed into line of heavy duty Oil Tight pushbuttons rated 550 v ac-dc. Line includes pushbuttons, selector switches, selector pushbuttons, pilot lights and such accessories as mushroom head, lever and key lock. All units are built around one standard contact block which can be used singly or in tandem, mounted vertically or horizontally. Metal button or selector knob is free to slide or rotate within a metal sleeve. Seal keeps oil out of enclosure and switching mechanism. All visible metal parts are chrome plated or anodized. Made by **Furnas Electric Co.**, 1009 W. McKee St., Batavia, Ill.

▲ For more details circle NED-690 C7 on enclosed inquiry slip ▲

AIR RELEASE VALVES
automatic, continuous operating

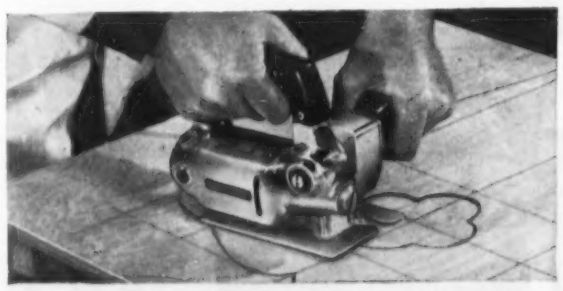
Air is released as fast as it accumulates by improved line of heavy duty air release valves (air traps or vents) which are automatic and continuous in operation. Normal installation is at high points of a piping system where air pockets form. Heavy duty units have cast iron body and head and a copper float which actuates a valve and seat of bronze. Application is to water, oil and brine pipelines, hot water heating systems, hot and cold water systems and chilled water air conditioning systems. Type 70 is offered in ½-in. sizes for up to 125 psi; type 72 in ½ and ¾-in. for up to 250 psi; and type 73 in 1, 1¼ and 1½ in. for 250 psi. Made by **V. D. Anderson Co.**, Dept. NED, 1935 W. 96th St., Cleveland 2, O.

▲ For more details circle NED-691 C7 on enclosed inquiry slip ▲

Dust Control for Industry

Pangborn Corp.—Importance of dust control to industry in relation to reduced maintenance costs, employee morale and commercial utilization of dust by-products is discussed in 16-page bulletin 922. Piece outlines standards of control and efficiency in dust collection and lists primary component parts of an engineered control system.

▲ For more details circle NED-692 C7 on enclosed inquiry slip ▲



New! Just $109.50 – world's only orbital-action bayonet saw!

Cuts wood, aluminum, steel!

Now—the first *real* improvement since portable jig saws were invented! It's Porter-Cable's revolutionary new Model 148—*guaranteed to outperform any other portable jig saw at any price!* *Orbital action* makes the difference. Blade teeth are in contact only on the cutting stroke—*back away* on the relief stroke. Harmful "drag" is completely gone—and perfomance reaches a new high.

Model 148 cuts up to 4 times faster than the best conventional saws. Full 2" capacity in wood—¾" in aluminum, ¼" in steel. See your Porter-Cable dealer—or write today for full information.

PORTER-CABLE Machine Company
7123 N. Salina Street
Syracuse 8, New York

Porter-Cable
Quality Electric Tools

▲ For more details circle NED-693 C7 on enclosed inquiry slip ▲

"Same Day" Shipment
FROM EX-CELL-O'S HUGE STOCK OF PRECISION
Drill Jig Bushings

Ex-Cell-O maintains huge stocks of precision Drill Jig Bushings, and efficient expediting facilities which make possible "same day" shipment. Orders are filled and dispatched from complete inventories in New York, Detroit, Los Angeles and London, Ontario, within a few hours after they are received! And Ex-Cell-O Drill Jig Bushings measure up to the highest standards of quality.

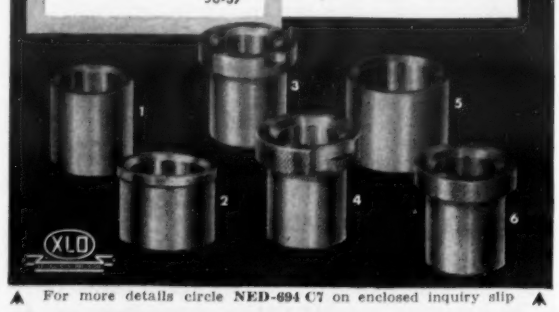
Call, wire or write Ex-Cell-O.

This complete Bushing Guide lists hundreds of Ex-Cell-O bushings available from stock. Write for as many copies as you need.

1. Headless Press Fit Bushings. 2. Head Liners. 3. Fixed Renewable Bushings. 4. Slip Renewable Bushings. 5. Headless Liners. 6. Head Press Fit Bushings.

56-37

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN



▲ For more details circle NED-694 C7 on enclosed inquiry slip ▲

HOW *Cambridge* WOVEN WIRE BELTS help Heat Treaters

increase uniformity, speed production

By providing continuous movement through heat treating cycles, woven wire conveyor belts eliminate batch handling, increase product uniformity and production capacity in annealing, brazing, quenching, tempering, sintering, etc. EXAMPLE:

Continuous Annealing

MOVING BELT carries a stream of brass light bulb ferrules through furnace for continuous uniform annealing at 1400°F.

OPEN MESH of Cambridge belt allows free circulation of heat around the load so that hot spots are eliminated. Open mesh construction also permits rapid drainage in wet processes such as quenching and washing.

ALL-METAL BELT withstands heat up to 2100°F. (as in copper brazing) without damage, provides lasting strength because there are no seams, lacers or fasteners to break or wear.

SPECIAL RAISED EDGES hold parts on belt, are typical of variety of side and surface attachments available to hold your product during flat or inclined movement.

Cambridge Woven Wire Conveyor Belts are made in any size, mesh or weave, from any metal or alloy, and can be used under a wide range of conditions . . . hot or cold, wet or dry. Call your Cambridge Field Engineer to discuss how you can cut costs with continuous processing on woven wire conveyor belts. Look for his 'phone number under "Belting, Mechanical" in the Yellow Pages or write for a FREE 130-PAGE REFERENCE MANUAL.

The Cambridge Wire Cloth Co.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Department C, Cambridge 3, Maryland

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

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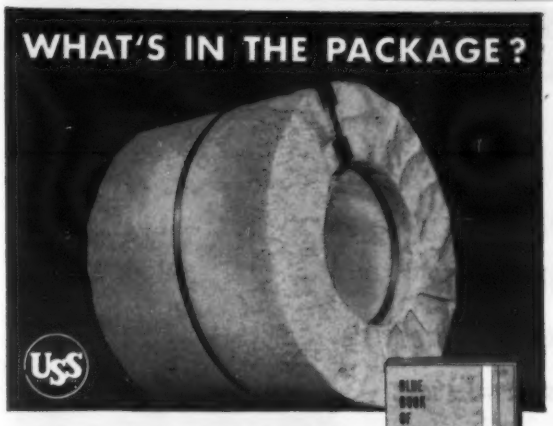
WHAT'S IN THE PACKAGE?



A huge coil of strip steel ready for shipment, wrapped and secured with USS GERRARD Flat Steel Strapping. No matter what you're packaging, you'll always get a better job in less time at lower cost with USS GERRARD Steel Strapping. Find out how by sending for a FREE copy of Gerrard's new 36-page Blue Book of Packaging—Today!

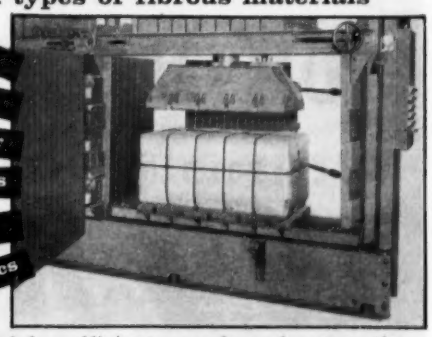
GERRARD STEEL STRAPPING DIVISION, UNITED STATES STEEL CORPORATION
4717 South Richmond Street, Chicago 32, Ill.

USS GERRARD
ROUND STEEL STRAPPING FLAT STEEL
UNITED STATES STEEL

For more details circle NED-696 C7 on enclosed inquiry slip

Continental's NEW
AUTOMATIC BALING PRESS
for high density compression of all types of fibrous materials

wool
scrap
leather
findings
paper
synthetics



Designed for efficient, speedy and automatic packing in cartons or bagging. Weight of bales automatically controlled; push-button operation; ample clearance for inserting and strapping, easy removal of bale; massive design assures minimum down-time for repairs.

Get complete details — see your nearest Continental Office.
CG-5720-A

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
BIRMINGHAM, ALABAMA
ATLANTA CLEVELAND DALLAS KNOXVILLE
MEMPHIS MOBILE NEW YORK 17

For more details circle NED-697 C7 on enclosed inquiry slip

No threads...
JOIN PLAIN-END PIPE

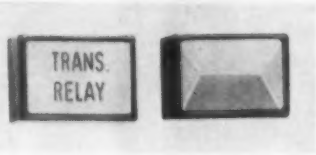
Ideal for fuel, coolant, air lines on compressors, heavy machinery, pumps and other original equipment. You'll get a permanent joint in just 30 seconds with this easy-to-join fitting. There's no threading, exact pipe fitting or alignment needed. Resilient rubber gaskets in the Dresser Style 65 give you permanent protection against vibration, normal expansion and contraction stresses that spring leaks in other joints. Sizes ⅜" to 2".

Complete line of couplings, tees, ells, etc. Write for catalog.

DRESSER®
MANUFACTURING DIVISION
30 Fisher Ave., Bradford, Pennsylvania

For more details circle NED-698 C7 on enclosed inquiry slip

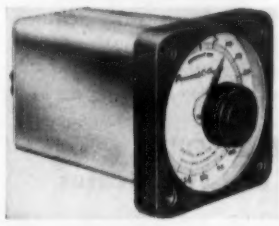
INDICATING LIGHTS
with flat or prismatic lenses



Rectangular shape of these indicating lights allows designation to be engraved directly on the lens, eliminating a separate nameplate. Lights are offered in all colors with flat or prismatic lenses. Either the low voltage T3¼ single-contact miniature bayonet lamp bulb or the NE-51 neon bulb can be used, the latter with a prism lens only. For 120/220-v service, a 10-w resistor is required. Lights are made in 1 13/32 x 31/32 in. and 31/32 x 11/16-in. sizes. Made by **H. R. Kirkland Co.**, 8010 King St., Morristown, N. J.

For more details circle NED-699 C7 on enclosed inquiry slip

PACKAGED TIMER
in 15-second to 8-hour cycles



Model 75 Percent-O-Cycle timer will close a contact for an adjustable interval in a fixed time cycle with repeat accuracies within 0.1-per cent. The compact packaged unit can minimize waste of power on electric furnaces, heaters, dehumidifiers, evaporators, dryers, material pressers, filters and pumps. It handles loads up to 25 amp at 150 v, 60 cycles without auxiliary equipment. Standard time cycles from 15 seconds to 8 hours are offered. Unit measures 3⅝ x 3⅝ x 5¾ in. Made by **Hagen Mfg. Co.**, 202 Twentieth St., Moline, Ill.

For more details circle NED-700 C7 on enclosed inquiry slip

PORTABLE GENERATORS
two 1500-w vertical shaft models

Vertical shaft design of two 1500-w portable electric generators permits entire weight to be supported by its tubular framework. Engine main bearing and shaft turn the armature only, but do not support it. A simple shock mounting isolates the rotating armature action and engine vibration from the frame. The 95-lb units measure 23¾ in. high by 23 in. diameter and are powered by four-cycle, single-cylinder air cooled gasoline engines with automatic rewind starter. Model EG-1.5A and ED-1.5D for alternating and direct current, respectively, provide 13 amp of 115 v current. Two plug-in outlets are provided. Made by **Thor Power Tool Co.**, State & Kane Sts., Aurora, Ill.

For more details circle NED-701 C7 on enclosed inquiry slip

When you see THIS . . ✓

WHEREVER drawings specify microinch roughness, the Profilometer® is the practical means for checking the parts against those specifications. *Here's why:*

1 The Profilometer *measures* the roughness of practically *all* machined and finished surfaces, *directly in microinches.*

2 It is *accurate and dependable*—even below 3 microinches.

3 It's an easy-to-use SHOP TOOL — built for hard service — reasonably priced — and *thoroughly proven* in *thousands* of production and inspection departments since 1936.

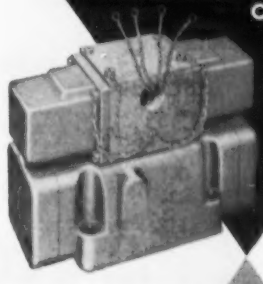
FREE BULLETIN LT14 gives details — shows many typical applications. WRITE TODAY!

Profilometer is a registered trade-mark.

MICROMETRICAL
MANUFACTURING COMPANY
333 S. Main St. Ann Arbor, Michigan

For more details circle NED-702 C7 on enclosed inquiry slip

LOOK To LOGAN
For POSITIVE HYDRAULIC CONTROL



Illustrated 9700 Series Solenoid Controlled Hydraulic Control Valve

Continuous-duty solenoids • Low power consumption • Dust-tight enclosures • Meets J.I.C. specifications • Full capacity thru-port and main spool • High-tensile alloy iron bodies • Internal or external pilot pressure and drain • Long-sealing surfaces • Open or closed center-type spools

WRITE FOR CATALOG 200—7

LOGANSPORT MACHINE CO., INC.
808 CENTER AVE., LOGANSPORT, INDIANA

For more details circle NED-703 C7 on enclosed inquiry slip

WHAT'S NEW IN MOTOR CONTROL?

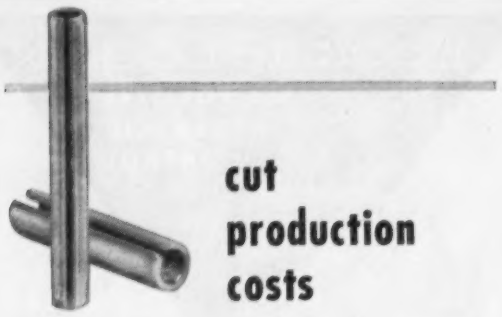
NOW... ROTO-PUSH THE ONE-BUTTON CONTROL STATION

The new Cutler-Hammer Roto-Push Unit offers amazing opportunities for simplified compact control panel design. One Roto-Push Unit can provide all the control functions which normally require two or three separate buttons. It is available in a wide range of selector and button operating mechanisms. Typical of its possibilities is the "Run-Safe-Jog" Roto-Push shown above. In addition to simplifying control panel design, Roto-Push brings savings in installation time and costs, speedier, safer and more efficient machine operation. Roto-Push is another star performer in the spectacular new line of Cutler-Hammer Heavy Duty Oil-Tight Pushbuttons. Be sure you have full information now. Write on your company letterhead for Pushbutton Handbook Pub. EL-178. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

GET IT FIRST IN CUTLER-HAMMER

For more details circle NED-704 C7 on enclosed inquiry slip



cut production costs with SEL-LOK spring pins

SEL-LOK spring pins materially reduce production costs, because you simply drive them in plain drilled holes with either hand or automatic assembly tools. They eliminate expensive close-tolerance tapping, reaming, peening and milling operations, with the associated rejects and waste. Once a SEL-LOK is installed, it stays put—the hollow split tube flexes to absorb vibration and shock. SEL-LOK spring pins are available at your authorized industrial distributor's in sizes ranging from 1/16 by 3/16 to 1/2 by 5 in., in heat treated alloy or corrosion resistant steel. Write us for Bulletin 2014 and samples. Sel-Lok Spring Pin Division, STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
SEL-LOK® SPRING PIN DIVISION SPS JENKINTOWN PENNSYLVANIA

For more details circle NED-705 C7 on enclosed inquiry slip

Now, in your own shop, on your present lathes, you can do such jobs as Milling, Slotting, Grinding, Grooving, Sawing at angles, recessing and many more complicated jobs easily and quickly with the Palmgren Milling Attachment. Yes, in just 10 seconds you can convert to any of these operations and save time and money doing work you formerly had to send out. Precision built, graduated for rotary angle and vertical adjustments, easily mounted on all makes of lathes by straddling tool post, this attachment has proved highly valuable in thousands of shops, both large and small. Three sizes: jaw widths 1½" $18.75; 2½" $24.75; 4" $39.75. Available NOW! Get more out of your lathes by using these versatile Palmgren Milling attachments. Write today.

Just a few operations you can do on your lathe! 120

CHICAGO TOOL AND ENGINEERING CO.
8378 South Chicago Ave., Chicago 17, Illinois

For more details circle NED-706 C7 on enclosed inquiry slip

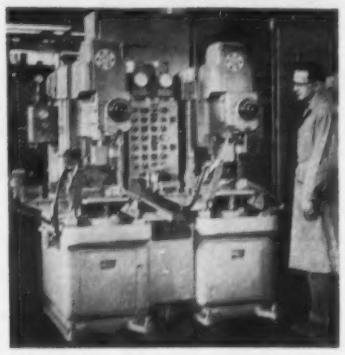
You'll find Ruemelin Fume Collectors ideal for stopping noxious welding fumes *at their source*. Counter-balanced inlet hood stays in working area, automatically. Improves working conditions . . . lessens fatigue . . . paves the way for increased plant production. Thousands in everyday service. Write for Fume Collector Bulletin No. 37E.

RUEMELIN MFG. CO.
3883 N. PALMER STREET MILWAUKEE 12, WIS., U. S. A.
MANUFACTURERS AND ENGINEERS — SAND BLAST AND DUST COLLECTING EQUIPMENT — WELDING FUME COLLECTORS

A 8409-1/9-A

For more details circle NED-707 C7 on enclosed inquiry slip

AUTOMATED HONING MACHINE
parts fed and aligned automatically

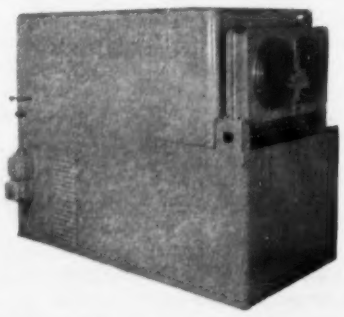


Automatic "square-axis" honed parts are produced by the model 738 Microhoner, an automated machine that generates the bore square with the Paral-Flat end faces. Accurate locating surfaces are provided for subsequent operations. A large-capacity loader and a gravity chute automatically carries parts to the pre-feed position for movement onto the fixture table by plunger. Parts are automatically fed, aligned, clamped and sized through the Microsize control which ends the honing cycle. After-gaging by an air gage during honing of next part controls segregation according to bore diameter. Photo shows two machines mounted side-by-side. Made by **Micromatic Hone Corp.**, 8102 Schoolcraft Ave., Detroit 38, Mich.

For more details circle NED-708 C7 on enclosed inquiry slip

CYLINDRICAL GRANULATOR
handles powders and stiff pastes

Two hollow cylindrical rotating gears which draw materials through the perforations that line them comprise this granulating and pelleting system. Wide variety of organic and inorganic substances, including low pressure polyethylene and most lumpy pastes and powders, can be reduced. Granules and pellets of exact length are produced with their surface texture controlled. Heating, cooling and moisture can be introduced to assist in the process. Outputs range from 20 lb to 10 tons per hour, depending on characteristics of material. Made by **Peerless Confectionery Equipment Co.**, Dept. NED, 158 Greene St., New York 12, N. Y.



For more details circle NED-709 C7 on enclosed inquiry slip

Machine Tool Switches

Minneapolis-Honeywell Regulator Co., Micro Switch Div. — Six series of heavy duty precision Micro switches for machine tools and other industrial equipment are fully described in 8-page fold-out form 84-222. Circuitry variations include two-circuit double-throw double-break; single-pole double throw; and double-pole double-throw.

For more details circle NED-710 C7 on enclosed inquiry slip

"Best Suited" for HIGH TEMPERATURES

VARGLAS SILICONE
CLASS H
TUBING and SLEEVING

for applications requiring prolonged heat endurance at temperatures up to 260°C.

Varglas Silicone tubing and sleeving were developed by Varflex for applications involving continuous operating temperatures up to 260°C. Exceptional stability is combined with the following qualities . . .

Flexibility—Sharp turns and 90° bends cause no cracking or peeling—no loss of dielectric strength.

Dielectrically-Strong—All Grades conform to NEMA and MIL-I-3190 Standards.

Moisture-Resistant—including resistance to salt water, mild alkalis and acids.

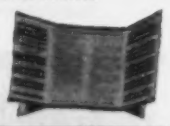
Flame-Resistant—Standard burning test is 45 seconds to burn 1 inch. Can be made self-extinguishing on special order.

Cold-Resistant—Excellent resistance to chafing and abrasion, flexible to —35°C.*

**For temperatures down to —65°C., and for applications requiring extraordinary flexibility, we recommend our new Varglas Silicone Rubber sleeving and tubing. Inquiries invited.*

Varflex CORPORATION

Send for FREE SAMPLES
Write today for free folder containing 25 different test samples of Varflex insulating sleeving, tubing, lead wire and tying cord.



VARFLEX SALES CO., INC., 310 N. Jay St., Rome, N. Y.

For more details circle NED-711 C7 on enclosed inquiry slip

drive screws with one finger!

you can, with BUCKEYE air-powered screwdrivers

Just press the throttle and the job is done—instantly. You can drive ten screws this way in the time it takes to drive just one screw by hand. What's more, you won't burr the screw head or damage the workpiece.

Your assembly methods should be as modern as your product. Catalog A-10 discloses some very helpful information about modern Buckeye tools for fastening work; write today for your copy.

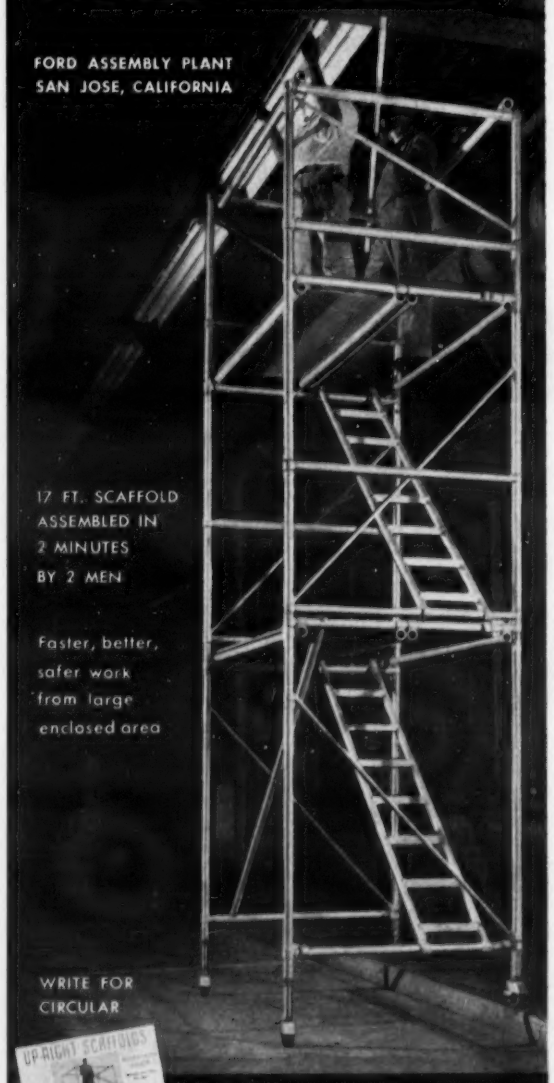
In Air Tools, Your Best Buy Is Buckeye

Buckeye Tools CORPORATION
DIVISION 34 • DAYTON 1, OHIO

For more details circle NED-712 C7 on enclosed inquiry slip

PLANT SAVES ON 45 ACRES OF OVERHEAD WORK WITH

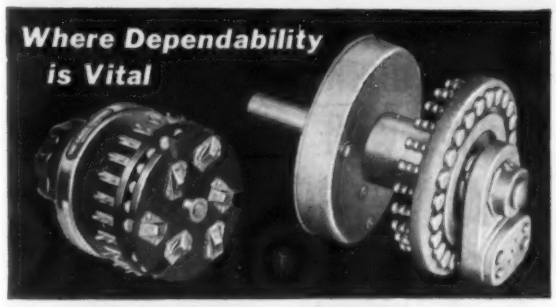
UP-RIGHT
aluminum
SCAFFOLD-ON-WHEELS



You, too, can save with rapidly assembled Up-Right scaffolds

Up-Right Scaffolds • Dept. 145
1013 Pardee St., Berkeley, Calif.

For more details circle NED-713 C7 on enclosed inquiry slip



Daven Rotary Switches Are Specified

HERE'S WHY:

- **Patented knee-action rotor**—ensures low, uniform contact resistance, trouble-free operation.
- **One-piece combination contact and solder lug**—solid-silver alloy contacts, gold plated to resist corrosion.
- **Turret-type solder lugs**—provide excellent mechanical and electrical connections.
- **Roller-type detent**—gives positive indexing action.
- **Minimum space**—as many as eight poles on each deck.

Write for complete data, catalog.

THE DAVEN CO.

542 West Mt. Pleasant Ave., Route 10, Livingston, N. J.

For more details circle NED-714 C7 on enclosed inquiry slip

CARBON-GRAPHITE Materials and Parts...

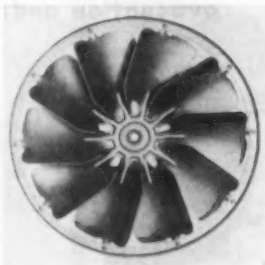
- ☐ ANODES
- ☐ BEARINGS
- ☐ BRAZING FURNACE BOATS
- ☐ BRUSHES for all rotating electrical equipment
- ☐ CLUTCH RINGS
- ☐ CONTACTS, Electrical
- ☐ CONTINUOUS CASTING DIES
- ☐ DASH POT PLUNGERS
- ☐ ELECTRIC FURNACE HEATING ELEMENTS
- ☐ FRICTION SEGMENTS
- ☐ GROUND ANODES for Corrosion prevention
- ☐ MOLDS and DIES
- ☐ POROUS CARBON
- ☐ PUMP VANES
- ☐ PURIFIED GRAPHITE
- ☐ RAIL BONDING MOLDS
- ☐ RESISTANCE WELDING and BRAZING TIPS
- ☐ SALT BATH RECTIFICATION RODS
- ☐ SEAL RINGS
- ☐ TROLLEY and PANTAGRAPH SHOES
- ☐ WATER HEATING and PASTEURIZATION ELECTRODES
- ☐ WELDING RODS, PLATES and PASTE
- ☐ VOLTAGE REGULATOR DISCS (Carbon Piles)

STACKPOLE

STACKPOLE CARBON COMPANY, St. Marys, Pa.

For more details circle NED-715 C7 on enclosed inquiry slip

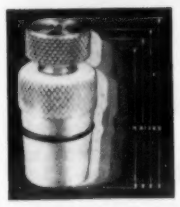
TEN-BLADED FANS
have air flow of six-bladed units



Series of ten-bladed slinger ring fans saves about 1 in. of axial depth in room air conditioners, while matching air flow performance of six-bladed fans. A one-piece, five-bladed slinger ring series is also available for use where cost is an important factor. Both series have an outer ring diameter of 14¼ in. and a 1 19/32-in. minimum axial depth. Several slinger ring positions are available. Blades and slinger rings are aluminum and hub may be aluminum, steel, rubber-bushed or rubber-bonded. Fans are statically balanced. Made by **Torrington Mfg. Co.**, Air Impeller Div., Dept. NED, Torrington, Conn.

For more details circle NED-717 C7 on enclosed inquiry slip

LABORATORY GLAND
four sizes for 6 and 10-mm shafts



Teflon body suitable for use with any material except metallic sodium is used in ASCO laboratory gland which is vacuum tight to 5 x 10^{-6} mm Hg. Four sizes with standard tapers of 24/40, 29/42, 34/45 and 45/60 are for either 6 or 10-mm shafts or tubing. When used as a thermometer port it allows depth regulation of the bulb. It also allows for proper adjustment of gas entry tubes and stirring rods. Gland is almost indestructible, chemically inert, wear compensating and operable at up to 200° C. Made by **Arthur F. Smith Co.**, Dept. A, 311 Alexander St., Rochester 4, N. Y.

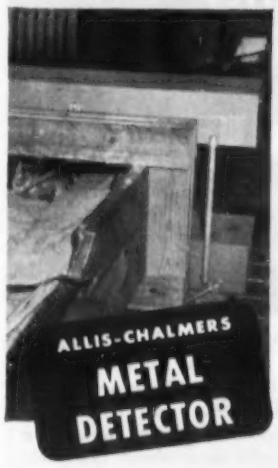
For more details circle NED-718 C7 on enclosed inquiry slip

MOTORIZED SPEED REDUCERS
for severe radial load duty

Extended bearing construction on the speed reducer of Slo-Speed gear motors and Speed-Trol variable speed motors with reducers adapts these units for severe radial load duty. By increasing distance between bearings on the output shaft, radial load capacity and rigidity are correspondingly increased. Available and in planning stage are ratings to 15 hp. All standard AGMA speeds from 350 to 20 rpm are furnished in both constant and variable speed models. Oil seals prevent leakage around output shaft in any mounting position. Made by **Sterling Electric Motors, Inc.**, Dept. NED, 5401 Telegraph Rd., Los Angeles 22, Calif.

For more details circle NED-719 C7 on enclosed inquiry slip

Mr. Hi Frequency, the Electronic "Sleuth" Tracks Down Tramp Metal



Gives Positive Protection

THIS electronic Sherlock apprehends Mr. Tramp Metal before he can sabotage your quality product. Magnetic or non-magnetic particles, no matter how deeply embedded, cannot evade the piercing eye of the metal detector without triggering a warning or reject mechanism.

The Allis-Chalmers metal detector is economical to operate and is easily installed in any production set-up. For complete information, contact your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wis. Ask for Bulletin 15B7217B.

ALLIS-CHALMERS A-C

A-5285

For more details circle NED-720 C7 on enclosed inquiry slip

HERE'S YOUR NEW CATALOG ON THE COMPLETE LINE OF MONARCH SOLID TIRES!

CATALOG MR-457 illustrates and describes the types and sizes of Monarch tires available for every lift truck job. This colorful 16-page booklet also contains preventive maintenance data, comparative "fatigue test" statistics and a special supplementary folder of lift truck manufacturers' specifications.

WRITE TODAY FOR YOUR FREE COPY!

THE MONARCH RUBBER COMPANY

260 LINCOLN PARK • HARTVILLE, O.

• 7-255 Gen. Motors Bldg., Detroit, Mich.
• 1035 Bartlett Street, Hayward, Calif.

9317-MR

For more details circle NED-721 C7 on enclosed inquiry slip

• Fastening hole cover with 3/16 x 3/16 brazier head Du Pont Industrial Rivets (above). Float (right) is 4' x 8' x 1'4".

FLOAT MANUFACTURER REPORTS:

NEW, IMAGINATIVE FASTENING APPLICATION

For Du Pont Industrial Rivets

HERE'S HOW the Western Plasticraft Corp. of Long Beach, Cal., has simplified and speeded production of its one-piece tank-type floats—

A neoprene bag is inflated within a hull of polyester resin-impregnated fibreglass, forcing the hull against a mold. When the float is cured, the bag is deflated and withdrawn through an access hole. The hole cover is then fastened in place with resin adhesive and Du Pont Industrial Rivets.

The resulting joint is the strongest part of the tank

It's one example of how Du Pont Industrial Rivets are permitting new methods of manufacture . . . saving time and money on old ones. They're *one-piece* fasteners set only from the head side . . . up to 25 a minute. Just insert and apply hot riveting iron. Rivets expand and lock parts together. Now available in boxes of 100.

For further information, contact your jobber, or write: E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Delaware.

DU PONT INDUSTRIAL BLIND EXPANSION RIVETS

A Product of Du Pont Explosives Research

DU PONT

Better Things for Better Living . . . through Chemistry

For more details circle NED-716 C7 on enclosed inquiry slip

Plastics
EXTRUSIONS by CONNEAUT

The Conneaut Rubber And Plastics Company is equipped to handle your requirements for almost any cross section in extruded Polyethylene and Vinyls. Where needed, we formulate special compounds in our own laboratories to meet your special applications. Complete die-making facilities in our own plant enable us to obtain extremely close tolerances . . . meet specifications exactly. Send us your blue prints for our quotations . . . or your problem for analysis and recommendations.

SEND FOR FREE, ILLUSTRATED FOLDER

Contains complete details on Conneaut's custom service on plastics compounding and extruding. 102-D

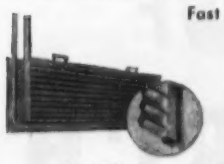
THE CONNEAUT RUBBER AND PLASTICS COMPANY
CONNEAUT, OHIO

For more details circle NED-722 C7 on enclosed inquiry slip

New Heat Transfer Sketch Book shows how to CUT COSTS all over the plant

Platecoil heat transfer units can be used in many ways, in many tanks, in many plants in many industries. The sketches shown above indicate some of the ways in which Platecoil has been used and can be used. They are featured in a new Platecoil bulletin that also contains many pictures, drawings and information on Platecoil installations and features. Send today for your free copy. Ask for Bulletin P-57.

Fast delivery from stock



PLATECOIL® Division Tranter Mfg. Inc. LANSING 4, MICHIGAN

You'll Find our Catalog in Sweet's Plant Engineering File.

For more details circle NED-723 C7 on enclosed inquiry slip

NEW exclusive design!

T-J REAMERS

CUT REPLACEMENT COST MORE THAN HALF!

Exclusive in design . . . the New-type T-J Reamers cut your replacement costs to *less than half!* Only the quickly installed *head* to replace, after buying original shank. Wide range of interchangeable heads from ½" to 2-3/4" inclusive, in 1/16" increments available . . . right or left hand spiral flutes. Tapered hole in head insures concentricity and *new* thread design assures a snug fit on smoothly tapered shank. Quick change of heads saves time. Head and arbor firmly locked together.

Left hand spiral, right hand cut. Right hand spiral, right hand cut.

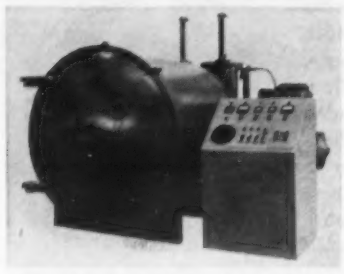
T-J TOMKINS-JOHNSON
RIVETERS · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

39 Years Experience

The Tomkins-Johnson Co., Jackson, Michigan

For more details circle NED-724 C7 on enclosed inquiry slip

VACUUM METALLIZING UNITS improved for faster chamber evacuation and shorter cycles



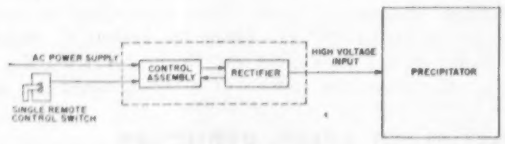
Redesign of vacuum pumping system in model 427 large-scale production vacuum metallizing unit achieves faster evacuation of 72-in. chamber, resulting in shorter metallizing cycles and greater productivity. Unit has two 16-in. Ring-Jet diffusion pumps of greater overall capacity than the three pumps formerly used, plus a booster pump of higher throughput.

Pump-down time to 0.5-micron has thus been reduced to 6 minutes or less. The high degree of automation in the control system has been continued with sequenced pushbutton operation of the unit. Solenoid-controlled, air operated poppet valves installed in vacuum manifold are remotely operated from front control console. Made by **F. J. Stokes Corp.**, High Vacuum Equipment Div., 5900 Tabor Rd., Philadelphia 20, Pa.

For more details circle NED-725 C7 on enclosed inquiry slip

ELECTRONIC CONTROL SYSTEM automates electrostatic or electric powered precipitators

Manual and visual electrical controls for electrostatic gas cleaning or precipitation equipment can be replaced with continuously acting feedback servo-circuits.



These electronic circuits, one for each individual electrical set, maintain rectifier power output at optimum level needed for highest precipitator performance.

System functions by continuously monitoring and readjusting spark rate to maintain optimum voltage and power input. This input will vary with temperature, flow rate, composition and humidity of gas being treated, and size and resistivity of particles being removed. The control assembly instantly determines and establishes proper rectifier output to provide power ideally suited for conditions existing in the precipitator at a given instant.

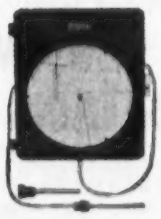
Only moving parts are the relays that function on startup and shutdown. Replaceable subassemblies are easily removed for maintenance. Set of standby controls, including reference instruments, is incorporated into each control unit. Made by **Research-Cottrell, Inc.**, Dept. NED, Bound Brook, N. J.

For more details circle NED-726 C7 on enclosed inquiry slip

PALMER MERCURY ACTUATED TEMPERATURE INDICATING INSTRUMENTS

4½" DIAL THERMOMETERS

Made in 3 types to suit any requirements. Rigid stem, wall or flush mounted, 11 inches of scale reading. Interchangeable with standard industrial separable sockets. Stem can be placed at any angle and case can be rotated to any readable position.



RECORDING THERMOMETERS

Twelve inch die-cast aluminum case with black or white wrinkle or satin finish. Single or multiple pen construction. Electric or spring wound clock, 24 hour or 7 Day Revolution. Flexible Armor and bulb of stainless steel. Ranges—40 + 950°F. or Equivalent in °C.

INDUSTRIAL THERMOMETERS

Red-Reading Mercury—Extruded brass case—chrome finish. Ranges —40 + 950°F or Equivalent in °C.

RED-READING MERCURY LABORATORY THERMOMETERS

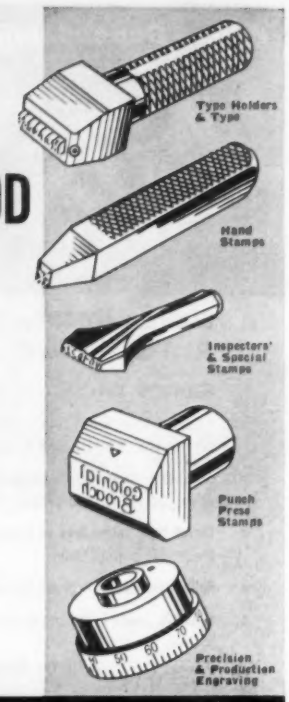
Thoroughly annealed for permanent accuracy. Complete line A. S. T. M. and fractional division types.

WRITE FOR CATALOG INFORMATION

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio

For more details circle NED-727 C7 on enclosed inquiry slip

You'll "mark" savings with NEW METHOD MARKING DEVICES...



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- Quick delivery

"We solve marking problems." Write our Mr. C.D.K. Brown for catalog and advice.

NMSS SINCE 1931 NEW METHOD STEEL STAMPS INC.
147 JOS. CAMPAU • DETROIT 7, MICH.

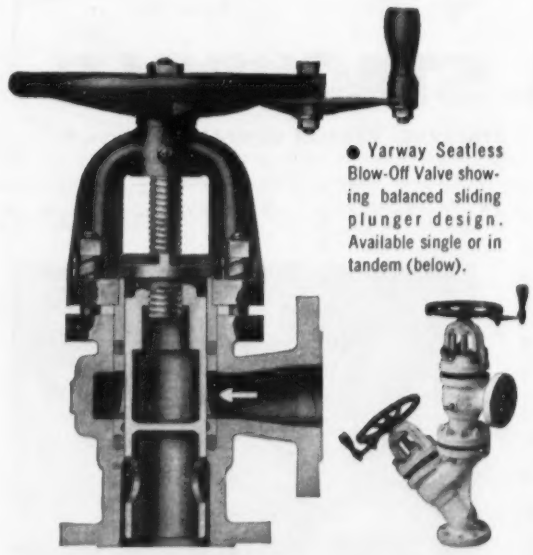
For more details circle NED-728 C7 on enclosed inquiry slip

KEEPS BOILER BLOW-DOWN LINES *DROP TIGHT*

Yarway Seatless Blow-Off Valves keep blow-down lines *drop tight* because *there is no seat to score, wear, clog or leak.*

The well-known balanced sliding plunger design—combined with the newest metallurgical developments—make Yarway Seatless Blow-Off Valves rate top efficiency for low and medium pressure boiler plants.

Among high pressure plants, Yarway Unit Tandem Valves are used by more than 4 out of 5.



● Yarway Seatless Blow-Off Valve showing balanced sliding plunger design. Available single or in tandem (below).

If you operate a boiler, be sure to send for the Yarway Blow-Off Valve Books—Bulletin B-426 for pressures to 400 psi or Bulletin B-433 for higher pressures to 2500 psi. Write . . .

YARNALL-WARING COMPANY
131 Mermaid Avenue, Philadelphia 18, Pa.
BRANCH OFFICES IN PRINCIPAL CITIES

YARWAY blow-off valves

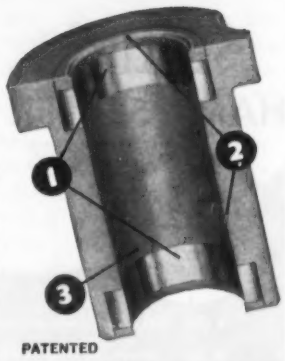
For more details circle NED-729 C7 on enclosed inquiry slip

MEYCO CARBIDE INSERTED DRILL JIG BUSHINGS PROVE THEMSELVES *IN Automation!*

The reason is simple: these unique bushings are ideally suited for long-running, uninterrupted operations!

MEYCO carbide inserted bushings assure long life for drills, jigs, fixtures . . . accurate work maintained, resulting in less down-time, fewer lost man-hours. Last almost as long as solid carbide bushings, cost slightly more than ordinary bushings. Get the full story:

Write for information and price list, ask for Catalog No. 49.



PATENTED

1. Tungsten carbide rings at the points of wear; 2. Steel rings protect drills and carbide; 3. Special hardened alloy steel body.

EST. 1888

W. F. MEYERS CO., INC., BEDFORD, INDIANA

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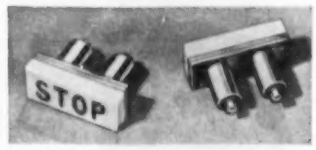
PANEL INDICATOR LIGHT carries an engraved "message"



Abbreviations, words or entire phrases can be engraved on the 1⅜ x 9/16-in. plastic lens face of the type L5500 twin-lamp panel indicator light. Designed for industrial control and annunciator panels, it has an anodized aluminum body and mounts with two machine screws. Lenses are offered in amber, blue, green, red or white translucent plastic. Over 40 of the units fit in a 9 x 5-in. area. Lens and lamps are easily replaced from the front. Made by **Hetherington, Inc.**, Dept. NED, Sharon Hill, Pa.

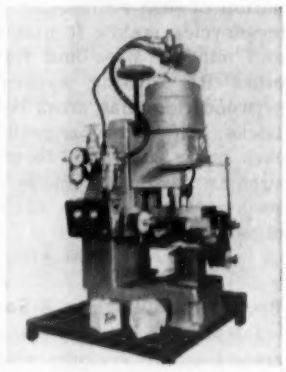
▲ For more details circle NED-733 C7 on enclosed inquiry slip ▲

GENEVA INDEX TABLE offered with 16 to 32 stations

This PDC-AM24 Geneva motion index table with 24-in. diameter dial plate and total thickness of about 6 in. can be obtained with from 16 to 32 stations. Geneva mechanism enables unit to handle up to 36-in. diameter dial plates. Unit is powered with a start and stop rotary air motor drive that indexes in 1 second and locks to within ±0.001 in., carrying a 1000-lb load. Air motor, limit switch, solenoid valve, airline filter, airline oiler and covered box with three interlocking control relays are standard. Made by **Precision Detroit Co.**, 539 N. Mechanic St., Jackson, Mich.

▲ For more details circle NED-734 C7 on enclosed inquiry slip ▲

HOT STAMPING PRESS fed manually or automatically

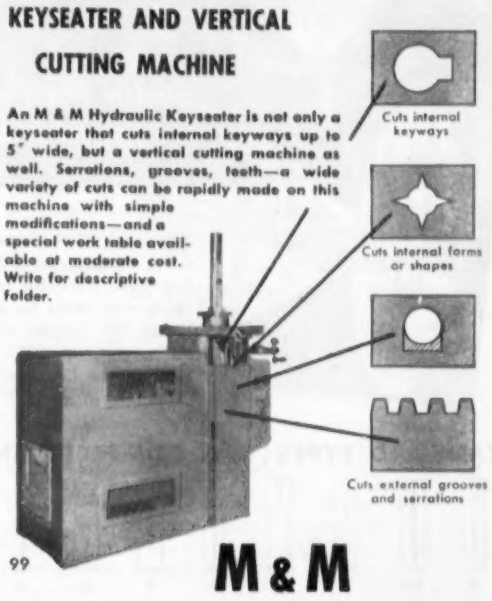


Up to 1000 pieces per hour can be foil marked with manual feed or up to 300 per cent more with an automatic feed on the Acroleaf model 250-H hot stamping press. It has a 6 x 6-in. die area for roll leaf up to 6 in. wide and a 9½-in. high adjustable die space with an 8-in. deep throat. Temperature of heated head is preset and automatically controlled, as are marking pressure, dwell and foil advance. Most thermosetting materials, as well as plastics, fiber, wood, paper and coated metals can be stamped. Press requires 75 to 125-psi air line and 110-120 v. Made by **Acromark Co.**, 7-11 Morrell St., Elizabeth 4, N. J.

▲ For more details circle NED-735 C7 on enclosed inquiry slip ▲

TRIPLE THE USEFULNESS OF YOUR M&M KEYSEATER AND VERTICAL CUTTING MACHINE

An M & M Hydraulic Keyseater is not only a keyseater that cuts internal keyways up to 5" wide, but a vertical cutting machine as well. Serrations, grooves, teeth—a wide variety of cuts can be rapidly made on this machine with simple modifications—and a special work table available at moderate cost. Write for descriptive folder.



99

M & M

KEYSEATERS AND VERTICAL CUTTING MACHINES

MITTS & MERRILL • 1000 So. Water St. • SAGINAW, MICH.

▲ For more details circle NED-736 C7 on enclosed inquiry slip ▲

Amazingly COOL HEAT VENTILATED REFLECTOR

NEW MODEL 55-VCX-701 FOSTORIA LOCALITE

FINEST OF ALL LOCAL LIGHTING UNITS

$8.97 EACH In Std. Pkg. of 4

MARVELOUS NEW SEEING TOOL

Frictional arm and collar disc joints give flexibility of a thousand positions to direct light exactly as wanted. Rugged construction with heavy duty industrial socket, Levolier switch and universal base.

INNER SHIELD ACCESSORY for extreme coolness when using 100 WATT lamps.

WRITE for complete catalog of Localite Models for every industrial use.

THE FOSTORIA PRESSED STEEL CORPORATION, FOSTORIA, OHIO

Localites are available through wholesalers everywhere

LOCALITE fostoria for Light ON the Job

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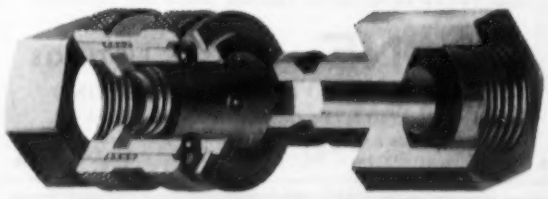
Couples or uncouples in ONE second...without tools

Titeflex

Quick-Seal Couplings



No waiting! No reaching for tools! Absolutely leak-proof—the higher the pressure the tighter the seal.

Titeflex Quick-Seal Couplings in a variety of alloys meet *every* need for controlling the flow of gases, liquids, lubricants. Choice of straight-through, single or double check-valve types. Complete range of sizes . . . from ¼" to 12" diameter.

Send for *new* Titeflex Coupling Catalog today. No charge, no obligation. Just mail coupon.

Titeflex

TITEFLEX, INC. (Industrial Products Division)
507 Hendee St. Springfield 4, Mass.

Without obligating us, please mail copy of *new* TITEFLEX Quick-Seal Coupling catalog.

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Title_____
Company_____
Street_____
City_____ Zone_____ State_____

▲ For more details circle NED-737 C7 on enclosed inquiry slip ▲

Picture above shows Truco vacuum water pick-up removing cuttings and coolant water as Truco unit is drilling. Because Truco is dust-free and relatively quiet, drilling was done in occupied sections of the building without disturbing tenants.

Job superintendent reports, "No other equipment could do the job the diamond drill performed on this project. It shaved weeks off our schedule and reduced our drilling costs materially."

TRUCO Drills 2½" Holes in 90 Seconds on 8,400 Outlet Electrical Project

JOB: Penetrate 3½" concrete cap over cellular steel flooring for 2½" dia. electrical outlets at Ford Motor Company's new Administration Building. 8,400 holes required to bring in electrical, telephone and intercom wiring for offices.

CONTRACTOR: Harlan Electric Company, Detroit

TOOLS: Truco Diamond Drilling Machine equipped with 750 RPM Motor and 2½" O. D. Truco Diamond Drill Bits. (Machine was also used for horizontal drilling).

DESCRIPTION: Spotting crews located outlets and cut the rubber floor tile with a circular saw. Portable rubber-tired Truco Diamond Drilling Machine then drilled through concrete in 90 seconds per hole. Complete cores were lifted out leaving smooth, perfect holes, requiring no patching or finishing. Finished floor undamaged by drilling operation.

WRITE FOR NAME OF NEAREST DISTRIBUTOR

WHEEL TRUEING TOOL CO.

93-3200 W. Davison Ave., Detroit 38, Michigan

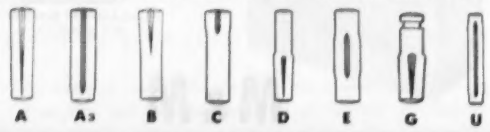
▲ For more details circle NED-732 C7 on enclosed inquiry slip ▲

get THIS catalog!

complete details on grooved pins and studs

Your copy of the new DRIV-LOK grooved fastener catalog is ready now. Write for it today. 24 pages of factual data in concise, easy to use form. No obligation, of course.

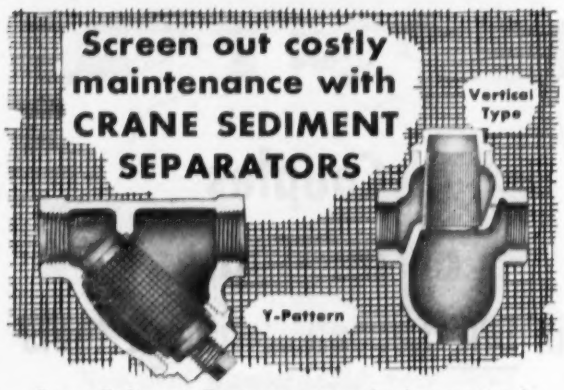
STANDARD TYPES . . . A COMPLETE LINE



DRIV-LOK PIN COMPANY
717 Chauncey St. • Sycamore, Illinois

For more details circle NED-739 C7 on enclosed inquiry slip

Screen out costly maintenance with CRANE SEDIMENT SEPARATORS



Crane Sediment Separators trap foreign matter in flow control lines—steam, water, air, gas or light oils, high or low pressure—and hold it for easy removal.

Dirt, scale, sand, etc., are prevented from damaging or spoiling product and ruining valve seats, automatic devices and other delicate equipment.

Extra large screening areas assure unrestricted flow of product. Blow-off connection for drain valve attachment permits easy cleanout. Y-patterns and vertical types. Full range of capacities and sizes.

Literature sent on request—See your Crane Representative or write to address below for literature.

CRANE VALVES & FITTINGS
PIPE • KITCHENS • PLUMBING • HEATING
Since 1855—Crane Co., General Offices: Chicago 5, Ill.
Branches and Wholesalers Serving All Areas

For more details circle NED-740 C7 on enclosed inquiry slip

Only TALK-A-PHONE OFFERS

6 STATION SELECTIVE Wireless INTERCOM
Plus Selective Paging with Reply

NO INSTALLATION
JUST PLUG IN AND TALK

Featuring TALK-A-PHONE'S exclusive "SONIC-GATE" circuit, which effectively suppresses line noises and hum while system is in actual operation, as well as when in Stand-By position.

This new versatile Wireless Intercom System will provide dependable, trouble-free intercommunication for office, factory, institution, home or anywhere. Using six master stations, 3 separate 2-way conversations can be held simultaneously. Any Master Station can page as many as ten wireless staff Stations simultaneously, in addition to all regular intercommunication features.

TALK-A-PHONE — Saves Time — Steps — Money!

Whatever your intercommunication needs — one Master and Sub Stations; all Master Stations; or a combination of Masters and Sub-Stations; TALK-A-PHONE has them all.

From 2 to 100 Stations—it's TALK-A-PHONE . . .

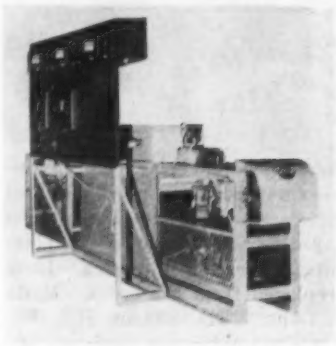
For complete literature . . . write to

TALK-A-PHONE CO.

Dept. NE-3, 1512 S. Pulaski Road, Chicago 23, Illinois

For more details circle NED-741 C7 on enclosed inquiry slip

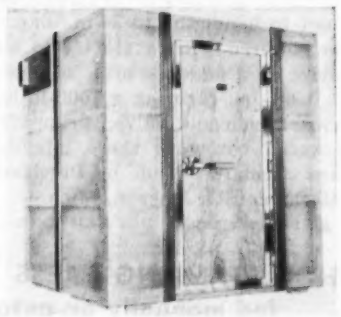
ELECTRIC FURNACE
for alloying, soldering transistors



Accurate to within ±0.25 - per cent of full scale, the B.T.U. Transheat electric furnace is designed for alloying, brazing and soldering of transistors and other semiconductor products. Furnace incorporates special muffle design for controlled temperature profile, long-lasting heaters, controlled atmosphere and curtains, variable speed drive, stainless steel belt and a temperature control system with quick-response thermocouples. Multiple temperature controlled zones for heating and cooling rates, and self-balancing input controls that maintain accurate heats are also featured. Made by **BTU Engineering Co.,** 441 Somerville Ave., Somerville 43, Mass.

For more details circle NED-742 C7 on enclosed inquiry slip

SCREEN ROOMS
for shielding electronic equipment



Screening material used in construction of Champion low-cost screen rooms is woven of steel wire, dipped in special alloy that firmly solders each mesh. This gives screen the same electrical characteristics as a solid piece of metal with perforations. Attenuation of 100 decibels or more from 200 kc to 1000 megacycles makes it practical for many commercial and military uses and for shielding diathermy and other RF heating apparatus. Extra-strong ¾-in. plywood floor has cross beams every 12 in. and Roto Locks hold interchangeable panels in contact with each other with 1200 lb pressure. All popular room sizes are available. Made by **Erik A. Lindgren & Associates, Inc.,** Dept. A, 4515 N. Ravenswood Ave., Chicago 40, Ill.

For more details circle NED-743 C7 on enclosed inquiry slip

Protective Coatings & Sealers

David E. Long Corp.—How DEL protective coatings protect metal, masonry and wood against acids, alkalies, alcohol, oils, solvents, weather, salts and water is explained in 12-page reference catalog. It also describes how metal, masonry and glass are given permanent, weathertight seal with DEL synthetic rubber compound. On-the-job results are shown.

For more details circle NED-744 C7 on enclosed inquiry slip

Check COLONIAL RUBBER COMPANY for

- EXPERT COMPOUNDING
- ACCURATE PRODUCTION
- QUICK DELIVERY of

Industrial Rubber Parts

If you use molded rubber or silicone rubber parts in your products, you can use Colonial's services to advantage in one or more of the ways listed above.
Check us on your requirements, whether for compound development, parts production or both. Our rubber development laboratory, die-making machine shop and large rubber molding plant offer "packaged" service to help you reduce fabricating costs and improve product quality with COLONIAL industrial rubber parts. Write for more details, or send prints for prompt quotation.

1539A

COLONIAL RUBBER CO.
RAVENNA, OHIO

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Fast, Economical HAND SEALER
For Polyethylene, Pliofilm
And Other Thermo-Plastic Films

IDEAL FOR SHORT RUNS, TEST WORK, LABORATORIES, PRODUCTION LINES

SEALINE HAND SEALER

$23.90 F.O.B. CHICAGO

- For fast, flat sealing—straight or irregular shapes.
- Seals direct—no intermediate material required.
- Accurate adjustable heat control—200° to 450° F.
- Easy to handle—weighs less than 1 lb.

Order direct or write

SEALINE MFG. CORP.
4720 W. Lake St., Chicago 44, Illinois

For more details circle NED-746 C7 on enclosed inquiry slip

Run fasteners quicker or remove them faster with

THOR Air Impact Wrenches

If you want more punch for the money and tools which will stand up long after others are in the repair shop—you'll choose Thor air impact wrenches every time. You'll choose Thor because you can set and remove fasteners faster. You'll choose Thor because there's no torque reaction to tire the operator. The Thor impact wrenches do the work—not the operator. And Thor gives you the widest selection of tools—¼" to 1¼" bolt capacities—a variety of angle attachments and accessories.

Get Thor impact wrenches on the job today—watch your costs go down tomorrow. Call your Thor factory representative for demonstration. Thor Power Tool Co., Prudential Plaza, Chicago 1, Ill.

Thor PORTABLE POWER TOOLS

THOR POWER TOOL COMPANY
CHICAGO

Atlanta • Birmingham • Boston • Buffalo • Chicago
Cincinnati • Cleveland • Denver • Detroit • Houston
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Milwaukee • Newark • Long Island City, N.Y.
Philadelphia • Pittsburgh • Richmond • St. Louis
San Francisco • Seattle • Toronto, Canada
Export Division, New York City

For more details circle NED-747 C7 on enclosed inquiry slip

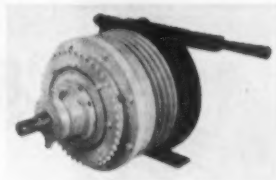
suspension type FLEXIBLE SHAFT MACHINE eliminates tooling problem for I. B. M.

International Business Machines Corporation had the problem of reaming holes .813" in diameter in the mounting hanger on the main base of their 407 Accounting Machine. To eliminate expensive tooling for this operation, they selected a STOW V50 portable flexible shaft machine, which was specially fitted with an on-off switch mounted on the handpiece.

The V50 machine delivers 1150, 2100, 3450 or 5750 RPM, is furnished with a 6-foot flexible shaft. Other speeds can be achieved by using different size pulleys. (I. B. M. ran the reamer at 750 RPM.) Available in either ¾, 1, 1½ or 3 HP, the V50 can be used for grinding, buffing, sanding, wire brushing and drilling. **Stow Manufacturing Co.** 26 Shear Street • Binghamton, New York. *Advt.*

▲ For more details circle **NED-748 C7** on enclosed inquiry slip ▲

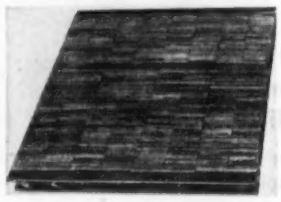
TWO-SPEED PULLEY provides reductions up to 8000:1



Standard disk clutch of this two-speed Hart reduction pulley locks the housing directly to the shaft and gives normal V-belt reduction, while built-in drum type clutch operating through internal gearing permits larger speed reductions up to 8000:1. Use of two built-in drum clutches provides two internally reduced speeds, both in one direction, or one forward and one reverse. Unit can also be equipped with almost any type of electrical, mechanical or pneumatic clutch, remotely controlled if desired. Pulley operation can be in a horizontal or vertical position. An overload release is optional. Made by **Hart Reduction Pulley Co.**, Dept. N, 426 W. Main St., Waukesha, Wis.

▲ For more details circle **NED-751 C7** on enclosed inquiry slip ▲

SHOCK ABSORBING FLOOR PADS prevent damage to falling loads



Installed on the floor, or recessed into specially built floor pockets, Flex-O rubber floor pads minimize damage to products and to floors in the event loads fall accidentally. Pads are practical in production or assembly areas, or on loading docks. They are built of steel channel frames and laminated segments of resilient rubber-reinforced fabric. Two standard sizes are available from **Bumpers, Inc.**, Dept. NED-1, 2534 Detroit Ave., Cleveland 13, O.

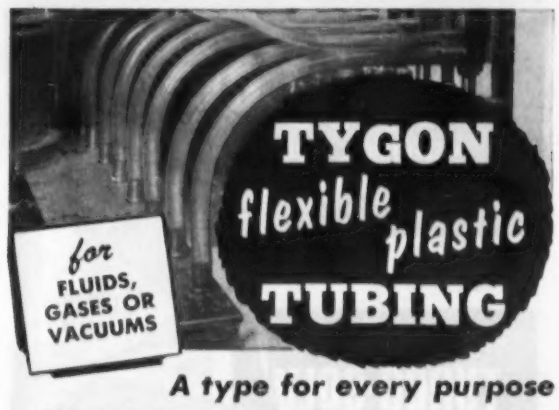
▲ For more details circle **NED-752 C7** on enclosed inquiry slip ▲

PRECISION VERNIER CALIPER read to full 12 or 14-in. lengths

Long 50-division Vernier scales with widely-spaced, easy-to-read graduations simplify setting and reading of this No. 123 Master-Vernier caliper without the

aid of a magnifying glass. Both Vernier plates fit flush with main scale to eliminate reading errors due to parallax. Inside and outside scales are on same side of tool. Reading surfaces are satin chrome finished, while other surfaces are hard chrome plated. Both 12 and 24-in. sizes are graduated in thousandths to read their full lengths. Made by **L. S. Starrett Co.**, Dept. ED, Athol, Mass.

▲ For more details circle **NED-753 C7** on enclosed inquiry slip ▲



A type for every purpose

Glass-clear transparency, flexibility and resistance to corrosion make Tygon Tubing the ideal piping medium for a wide range of applications . . . handling fluids, semi-solids, gases, vacuums or pressures.

Where pressure is a factor, outer braid reinforced Tygon Tubing will handle up to 300 psi. Heavy walled Tygon will handle full vacuums.

Tygon Tubing is resistant to acids, alkalies, oils, water and alcohol. It is non-toxic, non-contaminating, will handle foods, drugs and other high purity products. Standard sizes range from 1/16" i.d. to 2" i.d.

WRITE TODAY FOR BULLETIN T-87

Plastics and Synthetics Division

U. S. STONEWARE
AKRON 9, OHIO

204E

▲ For more details circle **NED-754 C7** on enclosed inquiry slip ▲

New Clark ADJUSTABLE
COUNTERBORE and SPOT-FACER
handles large diameters!

Fastest cutting, adjustable, large diameter spotfacer on the market! Takes heavy cuts without chattering by means of unique shearing action—no digging, no gouging! M3 high speed steel blades, adjustable for diameter or can be reset to size after grinding. Blades easily modified for special purposes. Machines steel forgings, heat-treated steels, cast iron, titanium, stainless, aluminum alloys, etc! Use this new Clark Adjustable Spot-Facer and Counterbore in MILLS, RADIALS, DRILLS, TURRET LATHES. Uses standard pilots or pilot drills. Straight or Morse tapered shanks.

Robert H. Clark Company
9330 Santa Monica Blvd., Beverly Hills, Calif.

▲ For more details circle **NED-749 C7** on enclosed inquiry slip ▲

Units can be purchased in flush-plate or box-type mountings and are adaptable for special panel mountings.

an oil, water, dust-tight
CONTROL SWITCH
made by machine tool builders to machine tool specifications

THE NAMCO GOLD N RING SEALTIGHT

- Heavy duty silver alloy contact points provide maximum electrical capacity and long life.
- Heavy duty terminal screws have 3/8" thread contact to prevent stripping during installation and permanently secure wires for continuous, trouble-free service.
- Single or double-pole contact block assemblies—can be used interchangeably with several types of GOLD-N-RING push button and selector operator heads.
- Rated for 600 volts—AC or DC. Meets all Joint Industry Committee and National Machine Tool Builder's Association requirements.
- Protected against oil and water seepage in operator head by Sealtight oil-resistant rubber diaphragm.
- Easily replaces existing switches.

For specifications send for Catalog ECS-56

Electrical Manufacturing Division
National Acme
The National Acme Company • 182 E. 131 St., Cleveland 8, Ohio

▲ For more details circle **NED-755 C7** on enclosed inquiry slip ▲

Look at the CLARKLIFT Line . . .

IT'S ENTIRELY NEW!

An exclusive feature list on the new *Clarklift* line would fill a lot of pages. It offers everything from a swing-back hood for easy maintenace to an emergency gas tank for extra safety.

Clarklift offers a shorter turning radius, yet a longer wheelbase for a smoother more stable ride. There are self-adjusting brakes that never need adjustment for the life of linings . . . six internal filters to keep working parts clean. Finger-tip controls, more power, faster lifting speeds . . . fact is, the new *Clarklift* line is a production pace setter for any lift truck in the field.

It's mighty important to you because these new developments can save you a lot of money, time and production. WRITE TODAY FOR THE NEW FULL-COLOR CONSTRUCTIONAL DETAIL BOOKLET.

CLARK EQUIPMENT
Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 21, Michigan

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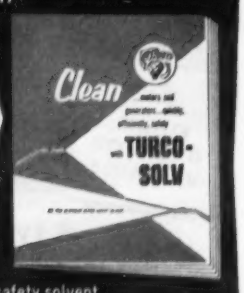
spray clean

• ELECTRICAL EQUIPMENT
• PLANT EQUIPMENT

free folder

tells why . . . only

TURCO-SOLV



the detergent-action safety solvent offers you this unchallenged combination of user benefits

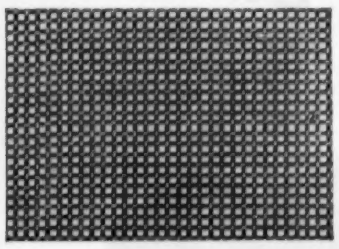
- SAFE ON ALL EQUIPMENT
- NO RESIDUE
- NON-FLAMMABLE*
- PEAK CLEANING EFFICIENCY
- OPTIMUM EVAPORATION RATE
- LOWER TOXICITY

*UNDER NORMAL USE CONDITIONS

TURCO PRODUCTS, INC.
Chemical Processing Compounds
6135 So. Central Ave., Los Angeles 1, Calif.
Factories: Newark, Chicago, Houston, Los Angeles, London, Rotterdam, Sydney, Mexico City, Naha (Okinawa)
Manufactured in Canada by B. W. Deane & Co., Montreal
Offices in all Principal Cities

▲ For more details circle NED-756 C7 on enclosed inquiry slip ▲

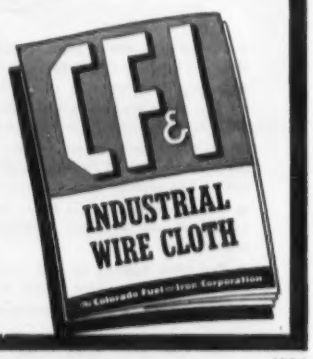
INDUSTRIAL WIRE CLOTH



any mesh . . . any weave . . . any metal

Whatever your requirements for industrial wire cloth or space screens — fabricating, filtering, screening, grading, cleaning, processing—CF&I can supply you with the right cloth for your job. Popular types are carried in large stocks—or you can order to your specifications. And remember, CF&I engineers are always ready to help you with your special screening problems.

FREE CATALOG — an information-packed, 44-page book on CF&I Industrial Wire Cloth that's yours for the asking. Data on mesh and wire sizes . . . metals and coatings . . . complete description of special cloths . . . wire gauge conversion tables . . . U.S. Standard Test Sieve specifications . . . complete ordering information — an invaluable source book on all types of industrial wire cloth and space screens. To get your free copy, write to Sales and Engineering, 56 Sterling St., Clinton, Mass., or 1080 19th Avenue, Oakland, Calif.

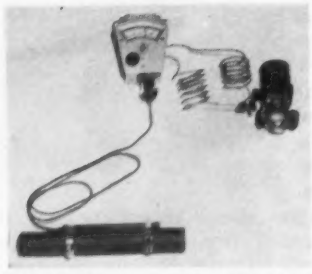


4234

THE COLORADO FUEL AND IRON CORPORATION—Albuquerque • Amarillo • Billings • Boise Butte • Casper • Denver • El Paso • Ft. Worth • Houston • Lincoln (Neb.) • Los Angeles Oakland • Oklahoma City • Phoenix • Portland • Pueblo • Salt Lake City • San Antonio San Francisco • Seattle • Spokane • Wichita • WICKWIRE SPENCER STEEL DIVISION— Atlanta • Boston • Buffalo • Chicago • Detroit • New Orleans • New York • Philadelphia CF&I OFFICES IN CANADA: Toronto • Montreal • CANADIAN REPRESENTATIVES AT: Calgary Edmonton • Vancouver • Winnipeg

▲ For more details circle NED-757 C7 on enclosed inquiry slip ▲

TEMPERATURE CONTROL is immune to corrosive attack

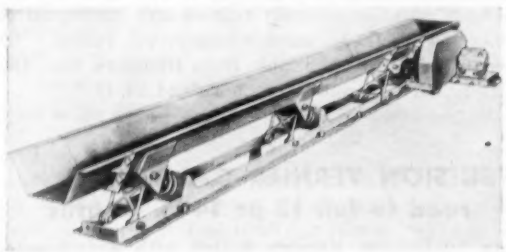


Corrosion occurring in handling plating, anodizing and pickling solutions does not affect this temperature control unit for installation on any Camac heat exchanger. A short section of Karbate (or other materials suitable for solution being handled) pipe is inserted into the suction line between tank and exchanger pump. The bulb does not impede flow or come in contact with solution. Control for setting and registering can be mounted anywhere. A matched solenoid valve is installed in the steam or coolant line. Both heating and cooling can be regulated by the same control unit. Models with and without indicating dial showing actual tank temperature are available. Desired temperature is set by a knob. Made by **Carl Buck & Associates,** Dept. NED, Box 267, Essex Fells, N. J.

▲ For more details circle NED-758 C7 on enclosed inquiry slip ▲

OSCILLATING CONVEYOR for bulk materials handling covers intermediate capacities

Added to Link-Belt's line of oscillating conveyors this Coilmount model is applicable in the intermediate ranges and capacities. Unit will handle abrasive or

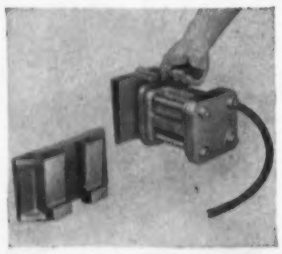


nonabrasive bulk substances of up to 85 per cent moisture and up to 500° F. Trough, which is supported by cast aluminum rocker legs and coil springs, receives its upward and forward oscillating movement from constant-stroke eccentric drive. Material is moved forward gently and continuously regardless of overloads or surges.

Conveyor is offered in assembled sections of 5 to 10-ft lengths and in trough widths of 10 and 20 in. Sections can be assembled in up to 100-ft lengths. Divider plates can be installed in trough to convey more than one material simultaneously, and discharge is possible at any point. Auxiliary components are available for screening, cooling, heating, drying and elevating. Conveyors can also be enclosed with metal covers to prevent dissipation of fumes or dust. Made by **Link-Belt Co.,** Dept. NED, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-759 C7 on enclosed inquiry slip ▲

CLEVELAND'S NEW PORTABLE VIBRATOR



Lightweight

Well-Balanced

Having trouble with materials sticking in your portable bins or trucks? If so the Cleveland Type LSRRH Portable Vibrator is just what you've been looking for. This lightweight, unusually well-balanced portable is ideal for all equipment such as concrete forms, septic tanks or large pipe forms, that do not require a permanent vibrator installation.

The Cleveland Type LSRRH Portable Vibrator will develop 7000 to 8000 vibrations per minute at maximum speed, maintaining a free flow under all conditions. Its sturdy cast steel bracket holds the LSRRH securely in place, making it ideal for heavy duty use.

For more detailed information write for our illustrated catalog.

Remember, this new portable vibrator is just one of The Cleveland Vibrator Company's complete line of air and electric vibrators. There's a type and size vibrator for your every requirement.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle NED-760 C7 on enclosed inquiry slip ▲

RUSH IS NO PROBLEM

ORDER **SPRAY NOZZLES** FROM SPRAYING SYSTEMS

• An important part of our service to customers is our "immediate" delivery department. Whatever brand of nozzle you may be using, you can replace with Spraying Systems . . . and obtain equal or better spray characteristics and improve your operation. We maintain a complete stock of all standard types and capacities . . . average inventory over 12,000 nozzle TYPES ...for shipment of rush orders on same day received.

WRITE FOR CATALOG 24 . . . forty-eight pages of complete data on thousands of nozzle types and capacities.

SPRAYING SYSTEMS CO.
3211 RANDOLPH STREET • BELLWOOD, ILLINOIS

ADVANCED SPRAY NOZZLE DESIGN FOR NEW DIMENSIONS IN CONTROL AND PERFORMANCE

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YOUR PUMPING JOBS *start fast and finish fast* WITH VIKING PUMPS

When you install Vikings, there's no wasted time with slow, uncertain priming . . . you start delivering in seconds. Delivery is then smooth and constant. There's no spasmodic operation to cause damage to valves and meters. And to finish, you can strip a tank fast and *completely* with positive Viking Rotary Pumps. They are built to pump all liquids, thick to thin.

WRITE *To start, send today for pump catalog 57Sg.*

VIKING PUMP COMPANY
Cedar Falls, Iowa, U.S.A. In Canada it's "ROTO-KING" Pumps
See our catalog in Sweets

▲ For more details circle NED-762 C7 on enclosed inquiry slip ▲

save with standard

HALLOWELL WORK BENCHES

HALLOWELL FEATURES

Sturdy, rigid, durable
4 tops—steel, Presdwood on steel, laminated wood, ShopTop
4 lengths, 5 widths, 4 heights —all standard
Use them as single units or continuous benches of any length
Neat, functional design

Standard units with *standard* accessories permit you to *custom build* HALLOWELL Work Benches to fit your requirements. Stocked by leading shop equipment dealers. Write for literature. STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

STANDARD PRESSED STEEL CO.
HALLOWELL SHOP EQUIPMENT DIVISION
sps
JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-763 C7 on enclosed inquiry slip ▲

Air-Cooled Lighting by Dazor at Low Cost

Choice of Arm Extensions:
31" (No. 1100)
20" (No. 1101)
Same Price

Adjustable-Arm Models

Light up machines and benches at rock-bottom cost and get Dazor dependability besides. New Adjustable-Arm Lamps mount solidly, hold fast in any position set. Either top- or side-mounted reflector. Air-cooled housing is safe to handle despite continuous use. Gray baked enamel over bonderizing. Call your Dazor distributor. Dazor Manufacturing Corp., St. Louis 10, Missouri.

...Makers of

DAZOR FLOATING LAMPS

For more details circle NED-764 C7 on enclosed inquiry slip

NEW DESIGN in HONING TOOLS provides

improved wear characteristics

greater abrasive support

for bores up to 4"

This new Barnesdril Honing Tool design means more efficient honing operations because it supplies better abrasive wear characteristics and greater strength at the point of cutting. The tool has very few parts in its simple construction, and may be designed for use with either a floating or rigid fixture. Barnesdril wing-type abrasive stones are press-fit between standard hardened inserts which act as side supports for the stones as well as guides in the bore. Fiber jackets reduce stone wear by protecting the inserts against the abrasive and serve to hold the wing-type stones firmly in place.

Fully protected by patents, this new honing tool will improve your honing operations and reduce honing tool costs on finishing operations. See your Barnesdril representative, or send us prints of your honing operations for recommendation.

few parts

quick-loading

simple construction

low tool maintenance

easy stone-replacement

BARNES DRILL CO.

866 CHESTNUT STREET • ROCKFORD, ILLINOIS
DETROIT OFFICE: 3419 South Telegraph Road

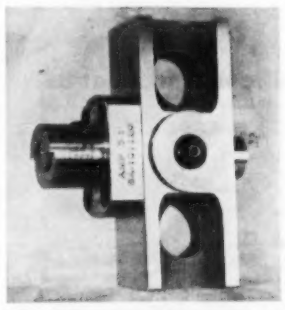
For more details circle NED-765 C7 on enclosed inquiry slip

SWITCH CONDITION INDICATOR
checks mechanically, electrically

Correct mechanical position and the electrical condition of an open or closed switch is indicated by the Doylite Switcheck. Suitable for use with machines controlled by precision snap-action switches, the device measures 1⅝ x 2 27/32 x 1¾ in. It is connected by four color-coded wires, two to the 115-v, 60-cycle line and two across the switch. A small neon lamp lights if the switch is open. It meets JIC and National Electrical Code requirements. Made by **Doyle Design & Machine Co.**, 53 Scio St., Rochester 4, N. Y.

For more details circle NED-766 C7 on enclosed inquiry slip

PIN GAGE AMPLIFIER
makes 0.001-in. readings possible



Flush pin gages used widely for inspections are made easier to read with addition of a 5-to-1 amplifier unit. Amplification makes gage practical even down to 0.001-in. tolerance. Step is ground on top of amplifier to suit tolerance of part to be inspected. Top of ledge represents the minimum dimension, for instance, for an offset surface. Units are stocked in nine different steps, although special steps can be obtained. Steps are precision ground for accuracy. Made by **Holmes Gage & Development Corp.**, Dept. NED, 537 Bonham Ave., Columbus 3, O.

For more details circle NED-767 C7 on enclosed inquiry slip

PLASTIC WHEEL
reinforced with nylon

High impact strength and abrasion resistance are inherent in Lamilon nylon-reinforced all plastic industrial wheels. They retain a smooth tread and concentricity in service and will not mark or mar wood, concrete or other types of floors. Wheels resist oils, greases and chemicals, have low water absorption and can be used at elevated temperatures. Sizes from 3 to 12 in. have alloy steel roller bearings with hardened steel outer race and provision for pressure lubrication. Thread guards can be provided. Made by **Fairbanks Co.**, Dept. 43, 395 Lafayette St., New York 3, N. Y.

For more details circle NED-768 C7 on enclosed inquiry slip

PERECO Electric **FURNACES and KILNS**

A NEW Bulletin You'll Want for Your Reference File

Write Today for Bulletin

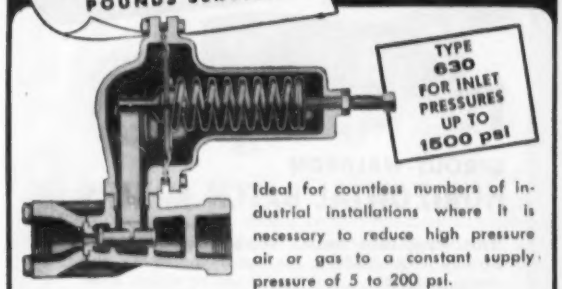
Used for years by the Industry's Leaders Throughout The World

PERENY EQUIPMENT CO.

Dept. G, 893 Chambers Rd.
Columbus 12, Ohio

For more details circle NED-769 C7 on enclosed inquiry slip

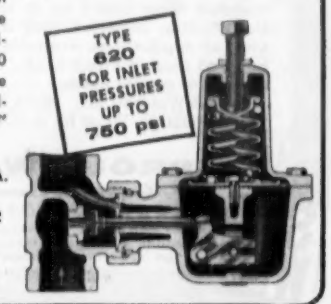
1st Choice FOR POUNDS TO POUNDS SERVICE — FISHER



Ideal for countless numbers of industrial installations where it is necessary to reduce high pressure air or gas to a constant supply pressure of 5 to 200 psi.

Available in 1" and 2" sizes.

An economical industrial regulator for use where pressure and flow conditions do not exceed 750 psi and reduced pressure not above 100 psi. Available in ¾", 1" and 1¼" sizes.



Write for Bulletin P11A.

FISHER GOVERNOR COMPANY
MARSHALLTOWN, IOWA
WOODSTOCK, ONTARIO

For more details circle NED-770 C7 on enclosed inquiry slip

this is important enough to read twice!

Now, *for the first time*, you can obtain 1, 2, or a dozen prototype *high alumina ceramic* parts for development work in your own plant . . . at low cost.

This new service is available to "custom-make" any small-lot number of Frenchtown *engineered* ceramic parts to your exacting specifications. Here's an opportunity to put these look-ahead materials "through the mill" to help solve a materials problem for new or existing products, without the barrier of buying production run quantities. Want to know more? Write, outlining your problem. Ask, too, for a copy of our 4-page bulletin which describes the complete line of Frenchtown *engineered* ceramics.

frenchtown PORCELAIN COMPANY

97 Muirhead Avenue • Trenton 9, New Jersey
California Representative: Edwin E. Starr, 4101 Rhodes Ave., North Hollywood, California, STanley 7-5879.

For more details circle NED-771 C7 on enclosed inquiry slip

SPLIT-SECOND TIMING with the NO-FILAMENT-TUBE ELECTRONIC TIMER

Instant Timing — cold-cathode tube requires no warm-up.
Immediate Recycling — no recharge time needed for capacitor.
Flexible Arrangements — four models with many circuit features.
Short-time Intervals 1.5, 3, 6, 12 sec. standard; 0.2, 0.5, or 24 seconds on special order.

Model C

Easy Setting — short intervals can be spread over entire dial.
Eight-ampere Contacts — single-pole double-throw load.
Small Size — 3¼" wide × 4⅜" high × 2" deep.
Low Cost — Model A . . . . . $29.00 list
Model C shown (momentary-contact start) . . . . . 32.00 list
Special features built-in on all models at nominal cost.

Write for complete information on Farmer Electronic Timers; and the CK Electronic Relay that will pick up impulses too short to operate a mechanical relay directly.

FARMER ELECTRIC Products Company, Incorporated
2300 WASHINGTON ST. NEWTON LOWER FALLS, MASS.

For more details circle NED-772 C7 on enclosed inquiry slip

For the intimate MIXING of floury, powdery, granular and fibrous materials

Write for Bulletin 128.

SPROUT-WALDRON

HORIZONTAL BATCH MIXERS

This equipment loads, blends, and discharges rapidly . . . is sanitary, dustless. Handles dry and damp materials . . . and liquids can be added. Ideal for the rapid, intimate mixing of small percentages of critical ingredients with a large bulk of basic material. Sizes from 1 cu. ft. to over 1,000 cu. ft. Construction materials and discharge gates to meet all applications. Available with heating, drying, and cooling attachments. Can be "adaptioneered" for special needs.

Sprout-Waldron also offers a complete line of vertical mixers. Write for details.

IN/438

SPROUT-WALDRON
— Manufacturing Engineers Since 1866 —
8 LOGAN STREET • MUNCY, PA.
EQUIPMENT FOR SIZE REDUCTION • MIXING & BLENDING • BULK MATERIALS HANDLING • PELLETING & CUBING • PRODUCT CLASSIFICATION

For more details circle NED-773 C7 on enclosed inquiry slip

HEATING PROCESS?

PROTECT

MATERIAL and EQUIPMENT

Automatically with Alnor® PYROTAC

Not expensive . . . but a simple, automatic way to safeguard your investment in heating equipment and materials in process.

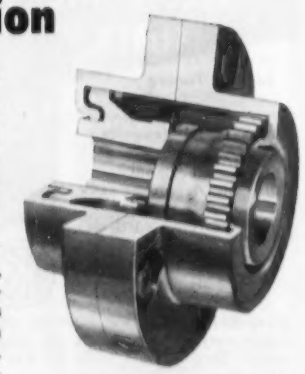
The precision-built Pyrotac constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the equipment at a safe, preset temperature. May also be used as a controller on processes where shutdown is required upon reaching final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures complete safety if couple or lead wire should break.

Write for Pyrotac bulletin. Attach this ad to your letterhead, send to: Alnor, Room 529, 420 No. LaSalle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-774 C7 on enclosed inquiry slip

Fast's Model B Coupling for *Efficient* Power Transmission



Model B Couplings . . . for light and medium drives . . . eliminate crank action, vibration and metal-to-metal contact between teeth—lubrication is positive. Ruggedly constructed, Fast's Couplings often are wear-free after 30 years of service.

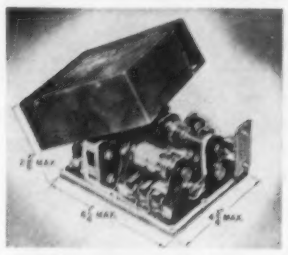
Providing highly efficient, economical power transmission, Fast's Couplings have retained leadership in their fields for over 35 years. The Model B is manufactured for shaft sizes up to 2⅝". Koppers free engineering service is available without obligation to you. For the most cost-saving answer to any coupling problem, write to KOPPERS COMPANY, INC., *Metal Products Division*, 3803 Scott Street, Baltimore 3, Maryland.

THE ORIGINAL KOPPERS FAST'S Couplings

Engineered Products Sold with Service

For more details circle NED-775 C7 on enclosed inquiry slip

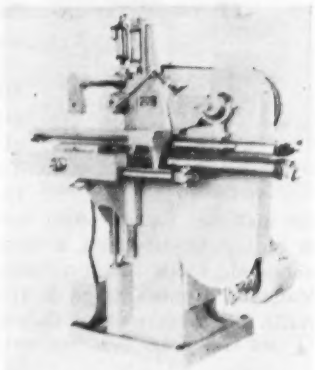
MULTIPLE SEQUENCE TIMER
handles up to six operations



Highly accurate, rapid responding timer is able to handle up to six separate timing sequence operations sumultaneously. Switches can be actuated by a magnetic clutch and cam arrangement which resets to zero upon completion of timing cycle or in event of power failure. Timer also contains five continuously pulsating switches, one of which continuously operates in a closed position for 0.050-second, ±0.010-second and open for 0.450-second, ±0.040-second. Switches operate under 0.250-amp load at 115 v 400 cycles over an input range from 24 to 30 v dc. Timing cycles are tailored to the application. Unit is enclosed in a die cast aluminum case. Made by **John Oster Mfg. Co.**, Avionic Div., 3 Main St., Racine, Wis.

For more details circle NED-776 C7 on enclosed inquiry slip

MILLING MACHINE
for germanium, silicon and quartz



Automatic special U.S. No. 1 milling machines used to cut off germanium, silicon and quartz to proper size for making transistors, oscillators and related products use a diamond-impregnated rotating disk, supported on a revolving arbor. Table feed rate and cycle are adjusted to requirements and special spindle speeds, arbor sizes and table cycles can be specified. Special machine has carefully selected V-belts, balanced pulleys, minimum run-out, self-aligning ball bearing arbor support brackets, pilot type arbors and dynamically balanced drive motors. Clear water is used as a coolant to prevent contamination and to assist in reclaiming the valuable chips. Made by **Cincinnati Mfg. Corp.**, U. S. Burke Machine Tool Div., Brotherton Rd., Cincinnati 27, O.

For more details circle NED-777 C7 on enclosed inquiry slip

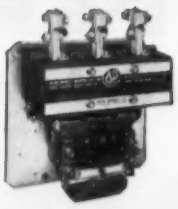
Small Machine Lubrication Units

Bijur Lubricating Corp.—Both cycle and one-shot lubricators described in 24-page bulletin 4C are used on small machines in the machine tool, packaging, textile and office equipment industries. Lubricators comprise a combination pump and reservoir, a line of oil-distributing tubing and a precise meter unit for each bearing.

For more details circle NED-778 C7 on enclosed inquiry slip

3 pole—Size 1

A-B The Sign of QUALITY MOTOR CONTROL



3 pole—Sizes 4 & 5

ALLEN-BRADLEY CONTACTORS
the ONE Complete Line

In all 9 sizes . . . from the small Size 00 (10 amps) to the husky Size 7 (900 amps) . . . A-B Bulletin 702 contactors have the same trouble free solenoid design. There is only ONE moving part . . . the plunger that carries the double break, silver alloy contacts which never need maintenance. For complete information, send for your A-B Handy Catalog.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.
In Canada—
Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
quality

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to product development

PM-68

Expanded aluminum will improve a wide variety of products.

As expanded metal, aluminum loses none of its original qualities, but assumes the added features of up to 80% reduction in weight per square foot, high percentage of open area and greater strength and rigidity than the original sheet.

Free catalog 507-EM includes sizes, weights, dimensions and typical applications.

PENN METAL COMPANY, INC.
General Sales Office: 40 Central Street, Boston 9, Mass.
Plant: Parkersburg, W. Va.

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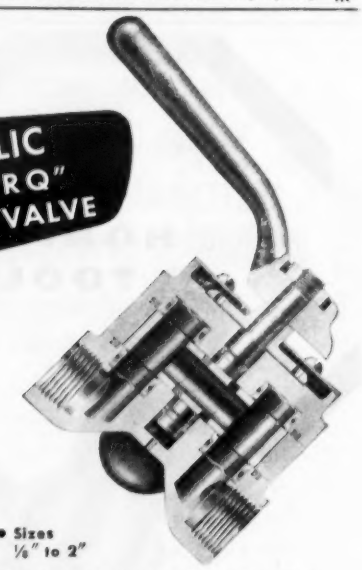

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- 0-6000 psi service
- Low turning torque
- Panel mounting
- Semi-steel, bronze, aluminum alloy
- Zero leakage
- 3 types of portings
- Sizes ⅛" to 2"

Write for new catalog No. 654A for complete information.
Distributors in principal cities coast to coast.

201

RM REPUBLIC MANUFACTURING CO.
15655 BROOKPARK ROAD • CLEVELAND 11, OHIO

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HEAR every word on the TELEPHONE
with a BURGESS-MANNING
"Hear-Here" **Booth**

Now you can hear every word clearly over the phone—even right next to a noisy machine. Burgess-Manning "HEAR-HERE" Booths are acoustically designed to provide an "isle of quiet" in the noisiest place. Ideal for manufacturing areas, hotels, stores, depots, shipping rooms, etc.—a model especially suited to each location.

Different in many ways:

- No Noise—always quiet
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- No Corners—to collect dirt
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Architectural Products Division of
BURGESS-MANNING COMPANY
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Manufacturers of 3-Way Functional Ceilings and Acousti-Booths for Telephoning

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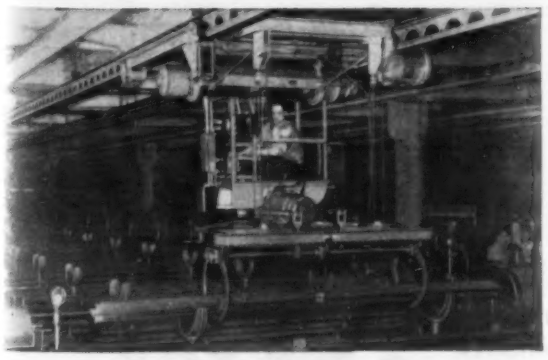
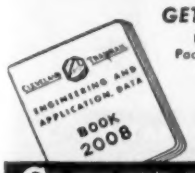


PICK UP — TRANSPORT — DELIVER
ALL OPERATIONS BY CAB OPERATOR

Pipe, rod, bars, etc., are picked up, transported and delivered with this motor-driven carrier and grab. The operator controls all motions from the cab without need of floor assistants. The carrier travels on two overhead rails. Material delivery is speeded. Floor space saved. Handling costs cut.



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CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6630 E. 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

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Work-Saving POWER for your pipe tools . . . anywhere!

Capacity: ¼" to 2" pipe, conduit; to 12" with geared tools; ¼" to 2" bolts.

Every RIDGID Pipe Tool TESTED individually before shipment

Portable RIDGID 200 Power Drive
with folding legs and tray

Cut, thread and ream easily when this very portable 200 turns pipe for your tools.

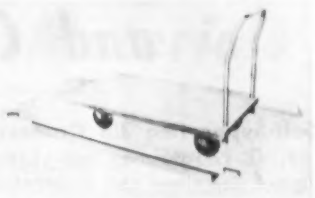
Integral legs and handy built-in folding tray make it extra easy to carry and set up. Speed Chuck operates easily by hand, grips tight forward, reverse. Light, compact, rigid working stance—see all its advantages at your Supply House.

The Ridge Tool Company, Elyria, Ohio, U. S. A.

RIDGID
Work-Saver Pipe Tools

For more details circle **NED-784 C7** on enclosed inquiry slip

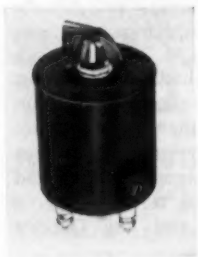
HAND TRUCKS & DOCK BOARDS of rigid, lightweight aluminum



Line of Met-L-ite aluminum hand trucks and dock boards includes standard truck sizes with 24 to 40 in. widths and lengths from 36 to 72 in. Capacities range up to 2000 lb. Trucks have formed aluminum deck with rounded corners and an adjustable wheelbase for short or long turning radius. They can be adjusted to turn on their own axes. Dockboards are exceptionally rigid, have safety tread plate, rounded extruded curbings with hand grips and beveled edges for easier approaches. Made by **Voltz Brothers, Inc.**, 2534 Indiana Ave., Chicago 16, Ill.

For more details circle **NED-785 C7** on enclosed inquiry slip

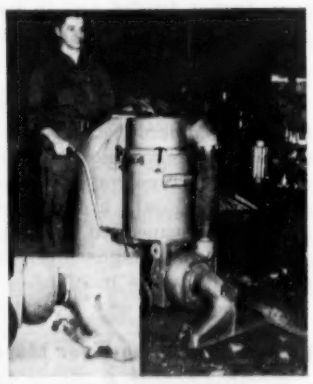
VARIABLE AUTOFORMERS replace resistive light controls



Designed for aircraft, Vari-Lite variable autoformers can be used to replace resistive-type light control units. With 115-v 400-cycle input, output is 0 to 28 v. Typical PA-1028 unit, which measures 2⅜ in. diameter by 2¾ in. and weighs 19 oz, has a 4-amp capacity. It meets MIL-T-9219 and MIL-E-5272A specifications. Made by **United Transformer Corp.**, Pacific Div., 4008 W. Jefferson Blvd., Los Angeles 16, Calif.

For more details circle **NED-786 C7** on enclosed inquiry slip

BRUSH ATTACHMENT extends utility of the Floormobile



Designed for use with the Floormobile floor cleaning machine, this brush attachment will loosen sticky materials or powder film residue from the floor so that it can be sucked up by the machine. Cleaner handles dust, dirt, string, paper, trash and most litter. In operation, a remote control cable attached to the handle presses the brush against the floor. Brush springs clear when lever is released. Brush attaches to Floormobiles now in use and functions going forward or backward. With the Floormobile, one man can clean up to 20,000 sq ft an hour. Made by **Handling Devices Co.**, Room 133, 43 Pearl St., Brookline 47, Mass.

For more details circle **NED-787 C7** on enclosed inquiry slip

by FAIRFIELD

If you use gears in the products you make, we believe it will pay you, as it has others, to become acquainted with FAIRFIELD—the place where fine gears are produced to meet your specifications EFFICIENTLY, ECONOMICALLY! Fairfield's production facilities are unexcelled for making all kinds of accurate, automotive type gears such as are now finding wide use in all branches of industry: for tractors, trucks, and buses . . . for agricultural implements . . . for construction machinery . . . for machine tools. Ask for latest literature describing Fairfield's facilities.

FAIRFIELD MANUFACTURING CO.

2335 S. Concord Rd. Lafayette, Indiana

For more details circle **NED-788 C7** on enclosed inquiry slip

No "Plumbing" Needed for the HW-17 HELIARC Torch

handles up to 150 Amperes

Here is the only air-cooled torch available for inert gas shielded arc welding with currents up to 150 amperes. With a continuous-duty capacity of 130 amperes (150 amperes for a reduced duty cycle), the HW-17 handles many jobs that formerly required a water-cooled torch. Elimination of external "plumbing", drain lines, mobile water pumps, and the like, cuts original installation costs almost in half and drastically reduces everyday maintenance costs.

The HW-17 is a shock- and heat-resistant torch fully capable of absorbing the hard knocks of all service within its range. A twist of the torch cap provides easy adjustment of 7- or 3-inch electrodes. *See your local LINDE representative today, or write for further information.*

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Got a knotty finishing problem? Then consult our experimental finishing department. We'll untangle it! And we'll analyze the best equipment and abrasive material for the job.

Today . . . before you invest in any finishing equipment . . . send us sample parts, a finished part for use as a guide and your specifications. We'll carry on from there. *We guarantee the same results in your plant as we get in our lab*—so how can you lose? Mail the parts and let's get started.

Globe BARREL FINISHING EQUIPMENT
Division CASALBI COMPANY
542 Wayne Street • JACKSON, MICHIGAN

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When Your Process Demands a Filter, Mixer or Mixing Tank

CHECK THE ADVANTAGES

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GENTLEMEN:
Please send me FREE, your new catalog, "Liquid Processing Equipment".

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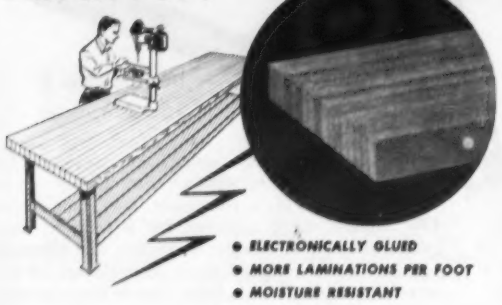
LAMINATED BENCH TOPS

● NOTHING—BUT NOTHING

TOPS A TOLCO BENCH TOP!



● ELECTRONICALLY GLUED
● MORE LAMINATIONS PER FOOT
● MOISTURE RESISTANT

Tolco Northern Maple, laminated assembly bench tops are built by the originators of electronic gluing. Skilled craftsmen blend their talents with the finest quality lumber available to bring you the supreme product in the laminated bench and table top industry. Tolco tops have more laminations per board foot than any other giving them superior strength and resistance to wear and tear. Special processing makes Tolco tops especially resistant to moisture and warpage. Write today for full color catalog illustrating and describing this outstanding product. Prices on request.

THE TOLERTON COMPANY

P. O. Box K 658 Alliance, Ohio

Established 1894

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RAYMOND

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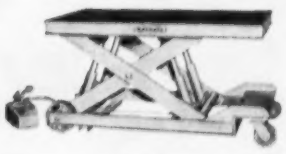
PORTABLE ELEVATING TABLE

For die handling, feeding, positioning. Telescopic and Non-Telescopic Models. Cap. 2,000 lbs.



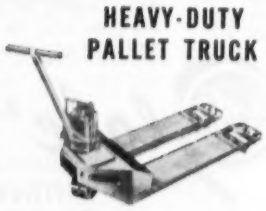
SHEET FEEDING TABLE

Keeps sheets, strips at right working level. Increases production, makes jobs safer, easier. Cap: 2,000 to 30,000 lbs.

RAYMOND

LIGHTWEIGHT PALLET TRUCK

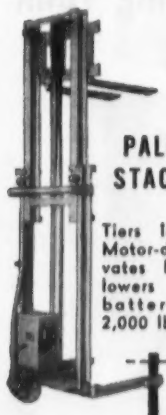
Rugged, maneuverable. 270° turning radius. Separate lift and lowering pedals. Cap: 2,000 lbs.



HEAVY-DUTY PALLET TRUCK

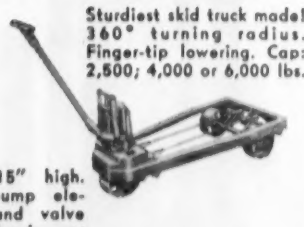
Handles your heavier loads. 360° turning radius. Finger-tip lowering. Cap: 4,000 or 6,000 lbs.

RAYMOND



PALLET STACKER

Tiers loads 115" high. Motor-driven pump elevates load, hand valve lowers it. Plug-in or battery-powered. Cap: 2,000 lbs.



SKID TRUCK

Sturdiest skid truck made! 360° turning radius. Finger-tip lowering. Cap: 2,500; 4,000 or 6,000 lbs.

SEND FOR FREE BULLETINS

The RAYMOND CORPORATION
4124 Madison St., Greene, N.Y.

Please send Bulletins on the following:

- ☐ Portable Elevating Table
- ☐ Lightweight Pallet Truck
- ☐ Pallet Stacker
- ☐ Sheet Feeding Table
- ☐ Heavy-Duty Pallet Truck
- ☐ Skid Truck

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-793 C7 on enclosed inquiry slip ▲

New Literature and Catalogs

Self-Supporting Jib Cranes

R. G. LeTourneau Inc.—Line of self-supporting jib cranes described and illustrated in 4-page folder 759-7-6 offers capacities from 6 to 15 tons. All units have 360-degree rotation and are self-supported on either base or pillar mounted columns.

▲ For more details circle NED-794 C7 on enclosed inquiry slip ▲

Gas Analyzer

Hays Corp.—Principle, construction, operation and features of both the Hays Condu-Therm analyzer and the Acratron electronic recorder are explained in 12-page catalog 56-1008-59. Analyzer can be used to determine amounts of carbon dioxide hydrogen, helium and methane, and employs the thermal conductivity method of analysis.

▲ For more details circle NED-795 C7 on enclosed inquiry slip ▲

Brushes for Industry

Osborn Mfg. Co. — 100-page illustrated catalog "Brushes for Industry" provides detailed information on how to select and use power brushes, Brushamatic machines, power brushes, paint and varnish brushes and maintenance brushes. Ten pages are devoted to power brush types, power brush terminology, a selection chart, engineering data and the Osborn brushing analysis service.

▲ For more details circle NED-796 C7 on enclosed inquiry slip ▲

Gravity & Power Conveyor Units

Standard Conveyor Co.—Up-to-date information is provided in 32-page bulletin 64 on twelve standardized conveyor units for handling unit materials in warehouses, on shipping platforms, in yards, inside box cars, trailer trucks and in various plant operations.

▲ For more details circle NED-797 C7 on enclosed inquiry slip ▲

Scaffolds & Ladders

Patent Scaffolding Co.—General catalog A on scaffolds and ladders presents 32 pages of text and photos on construction, concrete shoring, plant maintenance and building repair applications. Erection procedures and technical data are given for each of many types of built-up, suspended and swinging scaffolds. Wood, aluminum and magnesium ladders as well as aluminum scaffolds are included.

▲ For more details circle NED-798 C7 on enclosed inquiry slip ▲

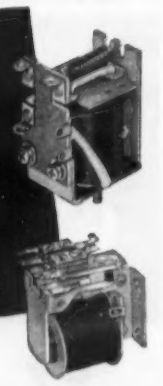
Fractional Horsepower Motors

Electro-Counter & Motor Co.—"Unidirectional and Reversible Gearmotors" in three sizes of laminations which allow for torques up to 1/30-hp are described in 12-page catalog. Standard gear speeds range up to 100 rpm. Schematics, performance and torque figures will help in proper motor selection.

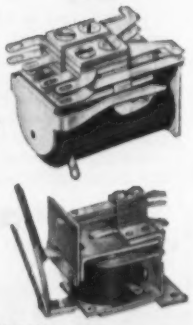
▲ For more details circle NED-799 C7 on enclosed inquiry slip ▲

RELAYS

- FOR INDUSTRIAL USE
- FOR MILITARY USE
- SIMPLE OR COMPLEX
- STANDARD OR SPECIAL



Whatever your relay needs may be, Comar will design and "custom-manufacture" the right relay for you. Electrical characteristics, sizes and mountings are tailor-made to exactly fit your requirements. Precision-engineered, easier to install, more efficient in operation, economical in price. Send for details now!



Comar ELECTRIC COMPANY
3349 ADDISON STREET CHICAGO 18, ILLINOIS

RELAYS • SOLENOIDS • COILS • TRANSFORMERS • SWITCHES • HERMETIC SEALING

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for Every Application

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GIVE YOU GREATER SAVINGS

DARNELL CASTERS & WHEELS

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FREE

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▲ For more details circle NED-801 C7 on enclosed inquiry slip ▲

IN CUTTING-OFF OPERATIONS

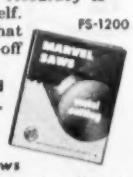
. . . speed without Accuracy is COSTLY!

Efficient cut-off of steel blanks from bars demands a combination of speed and accuracy. MARVEL and MARVEL alone achieves this combination with hack saw machines capable of delivering feeds and speeds which fully utilize the strength and heat resistance of the modern high speed hack saw blade.

Exclusive MARVEL dual power feed and crank lever method of reciprocation employed on the Series No. 6 and No. 9 Ball Bearing Hack Saw Machines provide increased speed and efficiency to the cut-off operation. Accuracy is assured by the construction of the machine itself.

MARVEL saws and blades form a team that guarantees the fastest, most accurate cutting-off combination.

FS-1200



For further information send for catalog C55 and the name of your nearest MARVEL field engineer.

ARMSTRONG-BLUM MFG. CO.
5700 W. Bloomingdale Ave., Chicago 39, U.S.A.
Manufacturers of the Outstanding MARVEL Metal Saws

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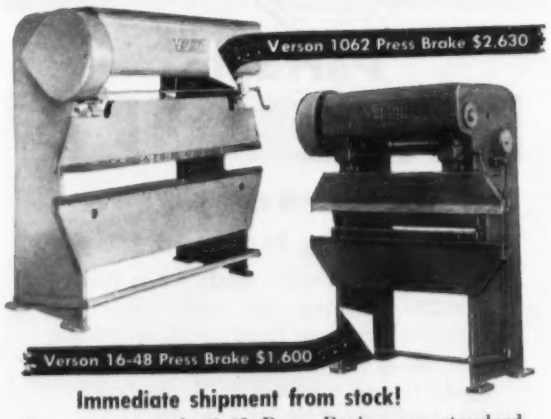
JUST TELL US WHERE YOU WANT IT DELIVERED



Immediate shipment from stock!

Verson 1062 and 16-48 Press Brakes are standard production items. You can have one from stock right now! No involved proposals, no long waits.

Standard Verson Model 1062, 16 ga. by 78" capacity, is priced at $2,630.00*; Model 16-48, 16 ga. by 48" capacity, is $1,600.00*. Built to big brake standards, these power brakes are compact and low in cost, rugged and efficient in performance.

Call for a Verson Standard Press Brake today. Both are available from stock.

*Prices, F.O.B. Chicago, less dies; subject to change without notice.

Verson

VERSON ALLSTEEL PRESS CO.

9329 S. Kenwood Ave., Chicago 19, Ill. 8300 S. Central Expressway, Dallas, Texas

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CATALOG of General Electric Alnico Permanent MAGNETS

Most complete line of standard stocked magnets — sintered and cast — ever assembled in a single catalog. Magnets for every use . . . electronics thru toys. All shapes, all sizes. Write, now.

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For more details circle NED-804 C7 on enclosed inquiry slip

For Dependable Flow Control!

. . . use

DAVIS FLOAT VALVES

THE DAVIS NO. 60 FLOAT VALVE

ENGINEERS interested in working out efficient, trouble-free fluid level and flow control hookups will find a wide choice of units offered in the Davis line of float valves, float boxes, and fluid control valves.

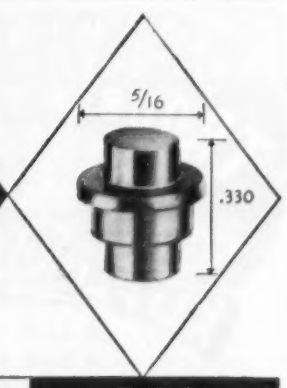
For Float Valve dependability the Davis No. 60 is unexcelled. Here are a few of its outstanding features:

1. The Famous Davis Single-Seat Pilot Stem Valve! Tight-closing and non-sticking. Standard sizes will open against any pressure up to 125 lbs.
2. No internal packing! Disc renewable easily and economically. Hot or cold liquid at high or low pressure handled without hunting or water hammer.
3. Sizes 3" and smaller are all-brass valves. Larger sizes have semi-steel body, bronze bonnet, piston and trim. Globe or angle body patterns. Send for Bulletin 101-B.

Davis
DAVIS REGULATOR COMPANY
2531 South Washtenaw • Chicago 8, Illinois

For more details circle NED-805 C7 on enclosed inquiry slip

SAVINGS $12.35 PER THOUSAND over machine method cost



SCREW MACHINING $15.00 per thousand

COLD HEADED $2.65 per thousand

Cold-Heading is the most versatile, most economical method for producing your fasteners and small parts. This case history is typical of thousands of money saving jobs we've done for our customers. May we quote on your requirements? Write today for the Hassall Catalog.

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SINCE 1850

Hassall

NAILS, RIVETS, SCREWS AND OTHER COLD-HEADED FASTENERS AND SPECIALTIES

For more details circle NED-806 C7 on enclosed inquiry slip

New Processes and Materials

RHODIUM PLATING
will not crack, curl or peel

Compressively stressed deposits produced by the Rhodex CS rhodium plating process will not curl, crack or peel. Deposited metal increases the fatigue resistance of the metal over which it is deposited. Plating bath is operated at room temperature or up to 122° F with a current density from 4 to 20 amp per square foot. Photo shows disintegrated rhodium electroplate and continuous Rhodex electroplate film left after brass base metal strips were dissolved. Application is to electrical and electronic components. Developed by **Sel-Rex Corp.**, Verona Ave. & Manchester Pl., Newark 4, N. J.

For more details circle NED-807 C7 on enclosed inquiry slip

HEAT-RESISTANT FABRIC
has interfused aluminum compound

Toughness and durability plus fire and heat resistance are characteristics of Ray-Tex all-purpose heat fabric. Developed by interfusing aluminum compound with tough cotton cording, fabric will not crack, peel or slough off in heat or cold. It resists oils, greases and most acids and alkalies, and can be cleaned with solvents, steam, or soap and water. Fabric is available in fire blankets, self-standing shields, curtains, drapes and covers. Made by **Frommelt Industries**, Dept. 55-L.D.S., Box 165, Dubuque, Iowa.

For more details circle NED-808 C7 on enclosed inquiry slip

DEGREASER SPRAY
removes grease, oil, carbon, tar

Motors and other electrical equipment, oily machinery and mobile equipment can be cleaned of grease, oil, carbon, tar and gums by Zipp degreaser, packaged in an aerosol spray can. Object is wiped clean within a minute after application. Spray also removes grease from painted surfaces and concrete floors. It leaves no film or vapor, drys rapidly, will not short electrical equipment, and is noncorrosive and nonflammable. Can contains 16 oz. Made by **Stewart-Hall Chemical Corp.**, Box 66-U7, Fleetwood Station, Mt. Vernon, N. Y.

For more details circle NED-809 C7 on enclosed inquiry slip

. . . for the kind of lubricant HOUGHTON can supply

MAYBE IT'S ONE OF THESE:

COSMOLUBE Multi-Purpose E. P.—treated Greases for Hot, Cold, Wet Spots.

TENAC Open Gear Lube that withstands high pressures and heat. Passes the 4-Gram Timken wear test.

STA-PUT mixed base greases and E.P.-treated adhesive oils.

ASK THE HOUGHTON MAN!

Somewhere you have a place for a better grease than you have yet found . . . a bearing, or gear set, or machine parts that are wearing faster than they need to—begging for that extra protection to prolong its operating life.

Ask the Houghton Man for our new Grease Booklet—or write E.F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Penna.

PRODUCTS OF . .

E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

For more details circle NED-810 C7 on enclosed inquiry slip

THIS CARTRIDGE IS EXPENDABLE.....

YOUR PLANT EQUIPMENT IS NOT, AFTER YOU INSTALL

BOWSER FIG. 835 FILTERS

Metalworking machinery, meters, valves, tools and other costly equipment is protected and more productive with Bowser filters in the lube or process-liquid lines.

Sizes from 2 to 100 sq. ft. Filter Area

BOWSER MICRO-FILTRATION POLISHES PROCESSED LIQUIDS

Edible oils, alcohols, lacquers and proprietary liquids are better finished with Bowser laminated cellulose cartridge filters.

FILTERS PETROLEUMS AND ALL OTHER OILS; SOLVENTS, THINNERS, PROCESS AND METAL PLANT LIQUIDS

Write For Fig. 835 Bulletin

PRODUCT OF BOWSER RESEARCH

Sales and Service in Principal Cities

BOWSER, INC., 1300 E. CREIGHTON, FT. WAYNE, IND.

For more details circle NED-811 C7 on enclosed inquiry slip

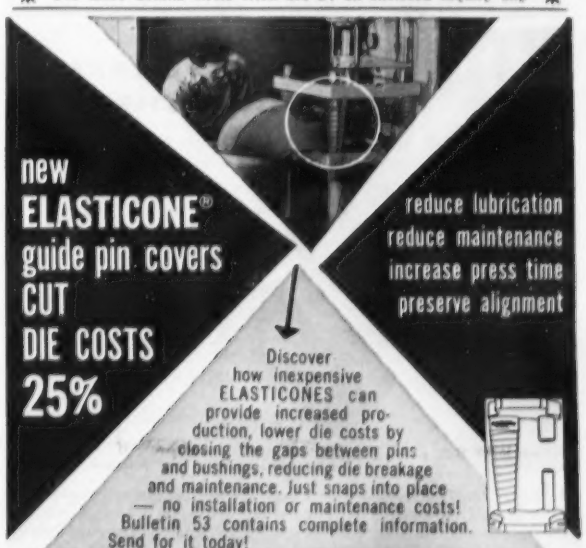
JOHNSON Self-Lubricating Ledaloyl bearings from stock

• A large selection of these powder metallurgy sleeve bearings is available in any quantity from Johnson distributors' stocks . . . plain, flanged and self-aligning styles. They are extremely low in cost, as they are molded to shape from powdered pre-cast bronze and require no machining. Ledaloyl bearings are impregnated with oil . . . therefore, self-lubricating. Ideal for hard-to-lubricate places. Write for catalog.

JOHNSON BRONZE COMPANY
580 S. Mill Street, New Castle, Pennsylvania

JOHNSON JB BEARINGS Sleeve-Type

For more details circle NED-812 C7 on enclosed inquiry slip



new ELASTICONE® guide pin covers CUT DIE COSTS 25%

reduce lubrication
reduce maintenance
increase press time
preserve alignment

Discover how inexpensive ELASTICONES can provide increased production, lower die costs by closing the gaps between pins and bushings, reducing die breakage and maintenance. Just snaps into place — no installation or maintenance costs! Bulletin 53 contains complete information. Send for it today!

CENTRAL Safety Equipment Co.
6607 MARSDEN ST. PHILADELPHIA 35, PA.

For complete information on Elasticones and a copy of Bulletin 53 use convenient coupon.

Name _____ Title _____
Firm Name _____
Address _____
City _____ Zone ____ State _____
NED-3

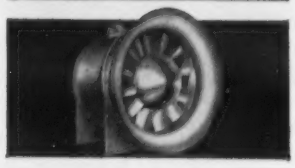
For more details circle NED-813 C7 on enclosed inquiry slip

CHANGE VOLUME OR PRESSURE WITH JOY AXIVANE FANS

Adjustable blades can be set on the job.

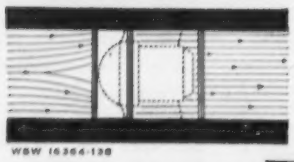
SAVE SPACE

The motor is inside . . . entire fan mounts inside ductwork . . . no foundations, offsets, drives, or guards.



SAVE LABOR

Simple, in-line design means quick, economical installation—even with inexperienced labor. Extremely low maintenance.



SAVE POWER

No belt power loss . . . high efficiency requires less power. Adjustable blades can correct for poor ductwork or unpredictable resistance.

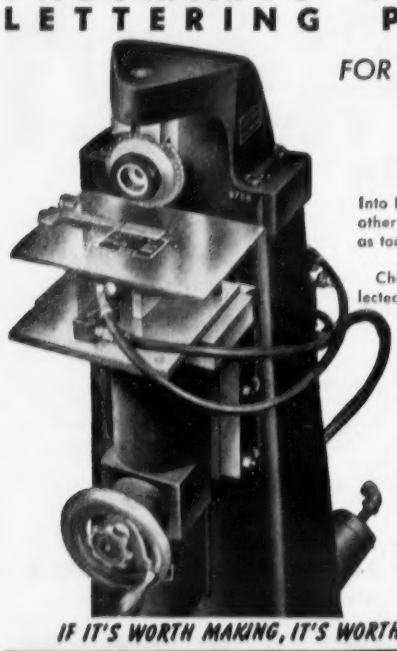
WBW 16364-138

Find out More about Joy High-Performance Fans . . . Get FREE BULLETIN 138-54

JOY MANUFACTURING COMPANY
Oliver Building, Pittsburgh 22, Pa.
In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario.

For more details circle NED-814 C7 on enclosed inquiry slip

PNEUMATIC LETTERING POWER PRESS



FOR STAMPING SELECTIVE LETTERING

Into DIE components and other metal parts such as tools, gauges and jigs.

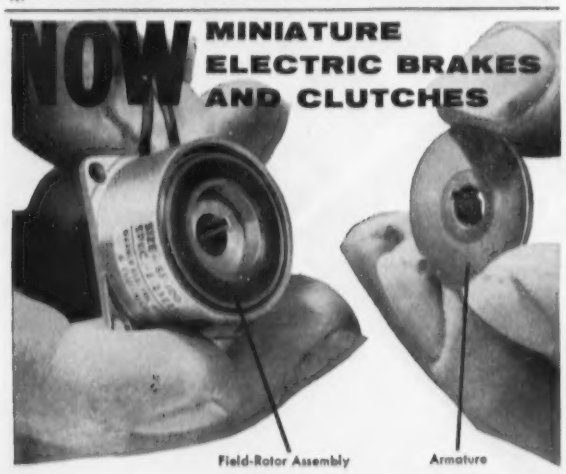
Characters are selected by turning dial and are stamped into part when foot pedal is depressed. Spacing of characters is automatic.

Requires 20 to 40 pounds line pressure. Write today for further information on this or any other member of the famous GTS line.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

For more details circle NED-815 C7 on enclosed inquiry slip



• Above, actual size, is Warner's new electro-magnetically operated SF-100 clutch-coupling designed for low-torque drives of instruments and miniaturized control mechanisms. The flange-mounted field is connected through pigtail leads to a 28- or 90-volt, d-c circuit. There are no slip rings or brushes. Torque is transmitted through the rotor to the armature, which may be keyed to the driving or driven member. Gives you instantaneous, positive engagement and release of loads up to 2 lb. in. (static torque rating). Clutch coupling is ⅞ in. axial length x 1⅛ in. dia. PB-100 electric brakes also available for combination stop-start control. Write for specification sheet "I" 25225.

WARNER

Beat competition with

ELECTRIC BRAKES AND CLUTCHES

Warner Electric Brake & Clutch Co., Beloit, Wis.

For more details circle NED-816 C7 on enclosed inquiry slip

New Literature & Catalogs

Shop Equipment Guide

Aurora Equipment Co., Equipto Div.—48-page "Reference Manual of Steel Equipment," No. 485, analyzes all types of steel shelving, drawers, lockers, work benches and tables, as well as other storage, store, office, warehouse and shop equipment.

For more details circle NED-817 C7 on enclosed inquiry slip

Mechanical Force Gages

Hunter Spring Co., Apparatus Div.—Specifications appear in 6-page bulletin 750c for each of company's 18 precision, direct-reading mechanical force gages. Both series D and smaller series L gages, which can be used for measuring both tension and compression loads up to 200 lb, are pictured with standard attachments.

For more details circle NED-818 C7 on enclosed inquiry slip

Silicone Oils & Greases

Dow Corning Corp.—Properties and performance of various silicone oils, greases and compounds are discussed in 8-page bulletin 6-101 along with typical applications. Piece gives attention to high speed, high temperature ball bearing problems and the influence of bearing load, speed, metal combinations and fit-up.

For more details circle NED-819 C7 on enclosed inquiry slip

Brush Finishing Machines

Osborn Mfg. Co.—The story of Brushamatic finishing as told in 20-page brochure COC 292 points up the applications of Brushamatic machines which range from rough, heavy operations to precision finishing of aircraft components. Every degree of mechanization, from semiautomatic to fully automated finishing, is afforded by these machines. Charts aid selection of proper brushes.

For more details circle NED-820 C7 on enclosed inquiry slip

Fuel Burning Systems

Orr & Sembower, Inc.—Fuel burning system described in 6-page folder 1231-A is a packaged combustion assembly utilizing gas, oil or combination firing. Unit's flexibility allows its use on furnaces, ovens, vats, kilns, dryers, boilers and other heat exchange equipment. Charts list available components.

For more details circle NED-821 C7 on enclosed inquiry slip

Precision Machine Tools

Carl Hirschman Co.—Selection of Swiss high precision machine tools featured in 12-page catalog MT-57 includes Tornos automatics, the Kummer dual head lathe, Hauser jig borers, jig grinders and pivot burnishers. Schaublin lathes and milling machines, Walter cutter grinders and many other machines are pictured and their specifications given.

For more details circle NED-822 C7 on enclosed inquiry slip

Convertible Steel Shelving

Republic Steel Corp., Berger Div.—36-page catalog ES-1087 on line of convertible steel shelving tells how to plan storage areas efficiently by using company's Storage Engineering service. Typical flow chart shows how planned storage eliminates wasted space, time and effort in receiving, handling and distributing tools and products in a plant or business.

For more details circle NED-823 C7 on enclosed inquiry slip

Illuminated Magnifiers

E. W. Pike & Co.—Flash-O-Lens illuminated magnifiers for examining industrial finishes, metals, glass, textiles, photos and maps are described briefly in 12-page folder. Battery and electrically operated units of up to 40X magnification are shown. Components of all Flash-O-Lens models are interchangeable.

For more details circle NED-824 C7 on enclosed inquiry slip

Steel Data Guide

Joseph T. Ryerson & Son, Inc.—A companion book to the Ryerson Steel Stock List, revised 256-page Steel Data book gives helpful information on machining and fabricating, specifications and tolerances, weights and dimensions, elements and safe loads. Tables, definitions and general data are also included.

For more details circle NED-825 C7 on enclosed inquiry slip

Metal Sawing Guidebook

W. O. Barnes Co.—Common metal cutting problems and their preferred solutions are featured in revised 36-page edition of the "Handbook of Metal Sawing." Guidebook covers proper selection and use of hand and power hack saw blades and band saw blades. Recommended cutting speeds, feeds and techniques are also tabulated.

For more details circle NED-826 C7 on enclosed inquiry slip

• ADAPTABLE TO YOUR SPECIAL REQUIREMENTS
• SIMPLIFIED CIRCUIT
• STEPLESS VOLTAGE CONTROL

Here's the most practical control wherever variable speed d-c motors are used. This full wave, thyratron tube, voltage control rectifier . . . famous THER quality throughout . . . can be custom-fitted to your application. Ideal for such equipment as machine tools, testing stands, materials handling, printing, etc.

Write today for details regarding your variable voltage applications.

It's THER . . . Whatever your d-c requirement

THER ELECTRIC & MACHINE WORKS
SERVING INDUSTRY FOR OVER 40 YEARS
15A SOUTH JEFFERSON STREET • CHICAGO 6, ILLINOIS

For more details circle NED-827 C7 on enclosed inquiry slip

tricky

BENDS ARE EASY WITH PEDRICK BENDERS

Complicated pipe, tube or structural metal bends are a cinch with Pedrick Production Benders—on either a production or job basis.

Show us your problem—with drawings, if possible—and we'll show you the answer. Write PEDRICK TOOL AND MACHINE CO., 3640 N. Lawrence St., Phila. 40, Pa. Dept. 6.

FREE "PEDRICK LINE" BULLETIN. WRITE TODAY.

PEDRICK production benders

For more details circle NED-828 C7 on enclosed inquiry slip

ELIMINATE THIS COSTLY TROUBLE ZONE with inexpensive TRICO KLIPLOK CLAMPS FOR FUSE CLIPS

• SAVE POWER
• SAVE FUSES
• SAVE CLIPS

Kliploks lock fuse and clips together . . . Prevent dangerous heating and arcing at contacts . . . Stop unnecessary fuse blows. Especially recommended for "Dual-Element" fuses.

WRITE FOR BUL. NO. 6

KLIPLOK TEST CLAMPS

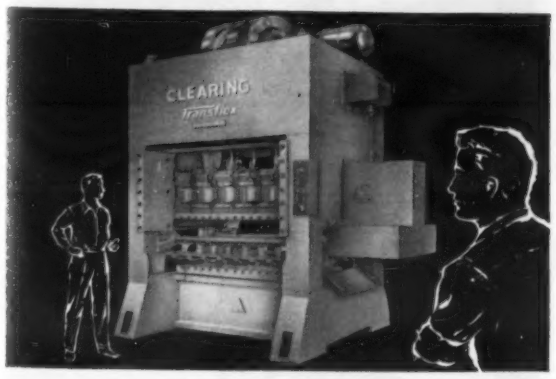
Use them everywhere. Attached in a jiffy. Clamp flat or round objects. Carry heavy currents.

Handy for temporary connections, meter and motor testing, jumpers, battery charging, etc. Seven sizes 0 to 300 Amps.

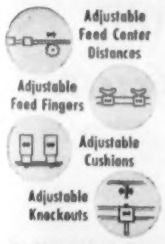
WRITE FOR BUL. NO. 7

TRICO FUSE MFG. CO. MILWAUKEE, WIS.

For more details circle NED-829 C7 on enclosed inquiry slip



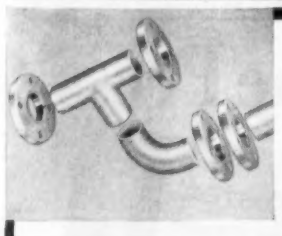
Press Automation at Moderate Cost?



Transflex—transfer feeding plus the ability to produce a variety of parts—has now been applied to Clearing Series-S presses. These economical presses (capacities—75 through 300 tons) have all the major adjustment features typical of all Transflex units. Get press automation plus flexibility of production at a relatively low cost. Investigate TRANSFLEX Series-S presses.

CLEARING PRESSES THE WAY TO EFFICIENT MASS PRODUCTION
CLEARING MACHINE CORPORATION *Div. of U.S. Industries, Inc.*
6499 W. 65th Street • Chicago 38, Illinois Hamilton Plant • Hamilton, Ohio

For more details circle **NED-830 C7** on enclosed inquiry slip

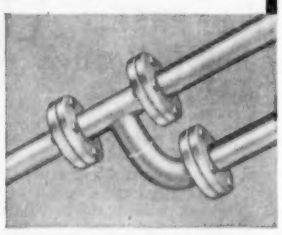


Speedline tee, elbow and flanges before assembly into line.

HERE'S HOW...

Speedline tangential feature (extra straight section) gives you assembly advantages. You can flange where you want to, weld where you want to. Speedline fittings are adaptable to your job requirements.

Speedline tangential feature allows ample clearance for direct flanging or butt welding.



Write for YOUR Speedline Fittings Catalog *Today*.
Distributors are located in principal cities from coast to coast

Speedline® STAINLESS STEEL FITTINGS
manufactured by **HORACE T. POTTS COMPANY**
532 East Erie Avenue • Philadelphia 34, Pa.

For more details circle **NED-831 C7** on enclosed inquiry slip

New Processes & Materials

SANITARY FLOOR COMPOUND
for new or old concrete floors

Exacting sanitary requirements of certain industries are met by Super-Patch, an easily applied compound for application to new or old concrete floors. It contains an anti-bacterial ingredient to prevent disintegration of floors by inhibiting molds and fungi and controlling odors. Use can be for patching or repairing worn floors or as an armor for topping of new concrete floors. Compressive strength is up to 10,000 psi. Offered in gray and colors in powdered form, it resists oils, grease, acids and cleaning compounds. Made by **Maintenance Engineering Co.,** 16 W. Johnson St., Philadelphia 44, Pa.

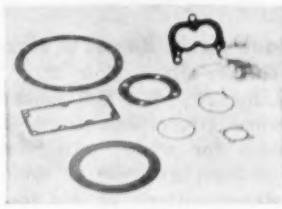
For more details circle **NED-833 C7** on enclosed inquiry slip

URETHANE FOAM PLASTIC
improved by slowing foam reaction

Control of fast-reacting urethanes used to produce foamed-in-place rigid materials has been improved with a new formulation that slows foam reactions of 30 to 60 seconds down to 100 to 180 seconds. This affords a safer handling margin and enables pouring into molds before urethanes harden in mixing vessels. More uniform and finer pore structure result. Formulation is a two-component liquid system of polyesters and isocyanates. Developed by **Dayton Rubber Co.,** Dept. 72, Dayton 1, O.

For more details circle **NED-834 C7** on enclosed inquiry slip

GASKETING MATERIAL
for delicate seals, rough surfaces



Cork granules and wood fibers bound together in a homogenous sheet with Goodyear Chemigum latex comprise Kaokork gasketing material. Various types contain up to 50 per cent rubber based on sheet weight. Cork and rubber combine to provide maximum compressive properties, while wood fibers and rubber provide sheet strength. Softness makes it suitable for delicate seals, but it is effective in seating of rough flange surfaces, cushioning irregular and sharp edges and sealing gaps. Oil resistant nitrile material is stocked in sheets up to 100 in. wide and from 15 to 45 points thick. Laminated sheets up to 1/8-in. thick are also offered. Made by **F. D. Farnam Co.,** 4946 W. Flournoy St., Chicago 44, Ill.

For more details circle **NED-835 C7** on enclosed inquiry slip

1 man handles Sheet Steel Faster, Easier with a C-F LIFTER

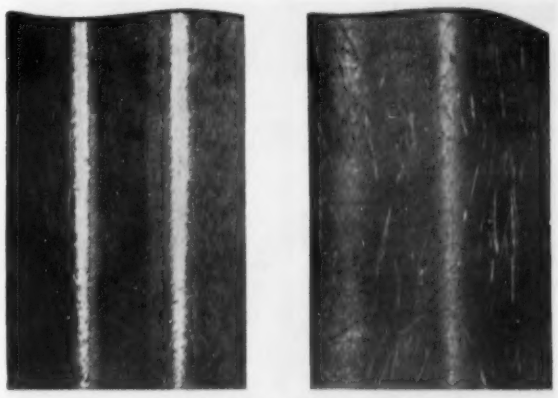
C-F Lifters, under one man operation, pick up, carry and unload more sheet steel tonnage per hour than any other method – and at lower cost per ton. Wide carrying angles hold sheets securely – won't damage high grade sheets; tong action insures safe carrying; fast opening and closing adjustments of Lifter jaws permit shifting from one size pack to another in seconds. C-F Lifters are made in standard or semi-special models to handle from 2 to 60 tons.

Write for Bulletin SL-30 for specific examples of C-F Lifter operation and economy.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

For more details circle **NED-836 C7** on enclosed inquiry slip

Only structoglas® "A" **GLAZING**
HAS BEEN PROVEN SUPERIOR BY OUTDOOR EXPOSURE TESTS



Unretouched 18-month test samples

STRUCTOGLAS "A" PANEL made from extra-hard new Paraplex® P-444 resin*.

COMPETITIVE PANEL made from a good light-stabilized standard resin.

FACT 1. Before testing, the above panels were identical in surface gloss, color, appearance.

FACT 2. After 18-month exposure in south Florida, competitive panel had lost all surface gloss, was badly discolored, exposed glass fibers. STRUCTOGLAS "A" showed no erosion and only slight color change.

FACT 3. Proven superiority of STRUCTOGLAS "A" results from new resin not used in other reinforced panels.

FACT 4. STRUCTOGLAS "A" costs no more than ordinary plastic panels.

** A product of Rohm & Haas Company*

structoglas®
division of
international molded plastics, inc.
4307 west 35th street • cleveland 9, ohio

STRUCTOGLAS 4307 West 35th St. • Cleveland 9, Ohio

GET THE COMPLETE STORY . . . send for Bulletin SL-51 unretouched photos and test data.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ ZONE ____ STATE ____
(Please Print)
7348-IM

For more details circle **NED-837 C7** on enclosed inquiry slip

USE *Fulflo* FILTERS
WHEN YOU WANT...

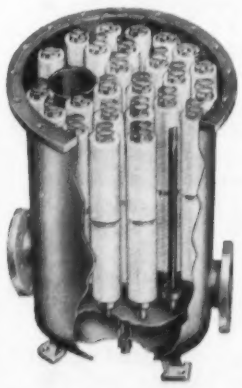
Continuous Micronic Clarity At the Flow Rate and Pressure Your Operations Require

You get the exact degree of *continuous micronic clarity* you need with Fulflo Filters — for industrial fluids of all kinds: oils; liquid chemicals; water; liquid fuels; lubricating oils; lacquers; paints; thinners; compressed air; CO_2 and other gases; commercial fluids. Standard models handle all normal flow rates and pressures. Special models are engineered for flow rates up to 2000 gpm or pressures as high as 5000 psi, with minimum pressure drop.

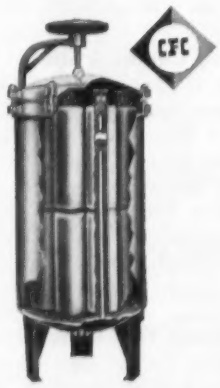
For engineering help — call on Commercial.
Write to Dept. NE for technical literature.

COMMERCIAL FILTERS CORPORATION
MELROSE 76, MASSACHUSETTS

Plants in Melrose, Massachusetts and Lebanon, Indiana



There's a Fulflo Filter to meet your exact needs for liquid or gas filtration. Genuine Honeycomb Filter Tubes are available in a wide range of positively controlled densities and a broad selection of materials — cotton, nylon, orlon, dacron, dynel, acetate, or glass fibre; containers of iron, steel, stainless steel, rubber-lined steel or nickel plated brass. Special containers, elements and sizes can be engineered to your individual requirements.



CFC Oil Filters (including former Honan-Crane models) effect substantial savings by prolonging equipment life and by extending the life of all types of oils. Multi-Cartridge Filter gives you a choice of six types of interchangeable cartridges for filtering both soluble and insoluble impurities in cutting, quenching and rolling-mill oils; turbine and vacuum pump oils; fuel and lubricating oils.

For more details circle **NED-832 C7** on enclosed inquiry slip

GATES-DRIVEWAYS

Need Anchor Guard Rail

Because it provides sturdy, *buffer* protection wherever you need it, Anchor Guard Rail is an ideal *first line of defense*. It prevents careless traffic damage around transformer enclosures, building corners, gates, driveways, pipe installations and valuable fencing. Anchor Guard Rail combines extreme strength, compact design, beauty and neatness with minimum upkeep.

Anchor Guard Rail is erected by Anchor's own men—backed by 65 years of experience. Call the Anchor office in your area for a free estimate. Or write: ANCHOR FENCE, 7003 Eastern Avenue, Baltimore 24, Maryland.

Anchor Fence®

Division of ANCHOR POST PRODUCTS, Inc.

Plants in: Baltimore, Md.; Houston, Texas; and Whittier, California
Sold direct from factory branches and warehouses in all principal cities

For more details circle NED-838 C7 on enclosed inquiry slip

ANOTHER Bendix ACHIEVEMENT

A resilient insert rack and panel connector

Here is the new and improved Bendix Type SR rack and panel electrical connector with outstanding resistance to vibration. The low engagement force of this connector gives it a decided advantage over existing connectors of this type.

Pressurization is easily accomplished. The resilient inserts press firmly against the shell wall holding the contacts in exact position. Insert patterns are available to mate with existing equipment in the field.

Adding to the efficiency of this rack and panel connector is the performance-proven Bendix "clip-type" closed entry socket.

Here, indeed, is another outstanding Bendix product that should be your first choice in rack and panel connectors.

Bendix SCINTILLA DIVISION of Bendix
SIDNEY, NEW YORK

Export Sales and Service:
Bendix International Division, 205 East 42nd St., New York 17, N. Y.

FACTORY BRANCH OFFICES:
117 E. Providencia Ave., Burbank, Calif. • Paterson Building, 18038 Mack Ave., Detroit 24, Mich. • 545 Cedar Lane, Teaneck, N. J. • 5906 North Port Washington Rd., Milwaukee 17, Wisc. • Hulman Building, 120 W. Second St., Dayton 2, Ohio • 2608 Inwood Road, Dallas 19, Texas • Boeing Field, Seattle 8, Washington • 1701 "K" Street, N.W., Washington 6, D. C.

For more details circle NED-839 C7 on enclosed inquiry slip

New Literature & Catalogs

What Arizona Offers Industry

Arizona Development Board—"Arizona Industrial Facts" is a comprehensive portfolio of information on the resources, tax law advantages, transportation facilities, banking and industrial development of this state. It offers confidential and specific research service to industries wishing more information on Arizona as applied to specific needs. Charts and maps amplify the story of this booming industrial state.

For more details circle NED-840 C7 on enclosed inquiry slip

Self-Locking Socket Screws

Standard Pressed Steel Co.—Self-locking Unbrako socket head cap and set screws in a wide variety of sizes and types, including alloy and stainless steel, are priced and listed in net price form 2194. Covered are set screws with plain cup, cone, oval, half-dog and flat points; socket head cap, shoulder, flat head cap and button head cap screws; and Dryseal-Thread pressure plugs. All feature Nylok self-locking nylon inserts.

For more details circle NED-841 C7 on enclosed inquiry slip

Automatic Conveyor Lubricators

J. N. Fauver Co.—Fundamental improvements made in series 100 and 700 automatic conveyor lubricators are pointed up in 8-page catalog CL956. Units can handle a complete range of lubricants from light oils to heavy fiber greases. Process is automatic and adjustable.

For more details circle NED-842 C7 on enclosed inquiry slip

Industrial Ceramics

Star Porcelain Co.—Basic data to aid in proper selection of Star industrial ceramic materials are provided in 20-page catalog 57. Physical, mechanical and electrical properties are listed on eight basic ceramic materials with suggested applications for each type. Tips on designing with ceramics are included.

For more details circle NED-843 C7 on enclosed inquiry slip

Wood Saws, Knives & Blades

Huther Bros. Saw Mfg. Co.—24-page illustrated catalog No. WS 300 describes straight and hollow ground rip, cross-cut and combination circular saw blades for woodworking operations. Data are included on groover or dado heads, wood groovers, matcher cutters, formed tooth cutters, carbide tipped saws, knives and cutter heads, straight knives, circular slitters and band saws.

For more details circle NED-844 C7 on enclosed inquiry slip

Small Tubular Thermostats

Franklin Dales Co.—Design, construction and operation of tubular Temp-Guard thermostats that make or break an electrical circuit by responding to changes in temperature or electrical load are presented in 8-page manual. Types are available for protection against overheating or overloading, for cycling, fire detection, regulating and other functions. Capacities range to 15 amp 115 v ac.

For more details circle NED-845 C7 on enclosed inquiry slip

Alloy Chains & Slings

S. G. Taylor Chain Co.—Usable as a guide to the proper use of alloy chains and alloy slings, illustrated 28 x 28-in. wall chart promotes plant safety. Table gives working loads of 1/4 to 2-in. single, double, triple and quadruple branch slings when used at varying angles with load. Guidance is also offered on the purchase and use of chain, as well as on inspection, wear and handling.

For more details circle NED-846 C7 on enclosed inquiry slip

Electric Tool Motor Brushes

Ohio Carbon Co.—Over 250 brushes for electric tool motors are described in 34-page catalog No. 176-C. Brush replacement is simplified by thorough indexing of type and size. Types are available for motors of practically all portable electric tools.

For more details circle NED-847 C7 on enclosed inquiry slip

Custom-Molded Rubber Parts

Tyer Rubber Co.—Engineering consultation, compound selection, mold design and manufacture of custom-molded rubber parts are covered in 8-page illustrated bulletin. Technical specifications include a description of relative properties of natural and synthetic rubbers. Parts shown include pads, pump bushings, diaphragms, belts, spouts, rolls and weather strip.

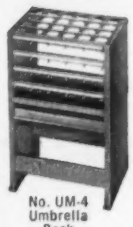
For more details circle NED-848 C7 on enclosed inquiry slip

The OFFICE VALET® Lockerette

Combines the best features of both lockers and coat racks.

Wraps are exposed to air and light. Employees do not face the weather in damp wraps that have been crumpled in dark lockers—do not eat soggy lunches, soaked by wet hats or gloves. Each person has his own spaced coat hanger, ventilated hat shelf and 12" x 12" x 15" deep lock box for lunches, tools and personal effects. Improves health and morale—lower absenteeism.

Lockerettes save space too . . . the No. 6-12 (2-column) accommodates 12 people in 6 feet; the No. 9-18 (illustrated) accommodates 18 in 9 feet.



No. UM-4 Umbrella Rack

WRITE FOR BULLETIN LO- 8

VOGEL-PETERSON CO. 1121 West 37th St. Chicago 9, Ill.

For more details circle NED-849 C7 on enclosed inquiry slip

Just off the Press!

Your FREE Copy Is Ready!

SEND for your *free* copy of the new Foster Quick Detachable Coupler Catalog—#110. Contains diagrammatic layout for applications. Simplified cataloging of coupler types and sizes in all price ranges. Fittings data, etc.

Send today for your free copy—no obligation, of course!

FOSTER MANUFACTURING COMPANY, INC.

2850 GRAVOIS • DEPT. 2-C • ST. LOUIS 18, MO.

For more details circle NED-850 C7 on enclosed inquiry slip

New Model 5 VIBRASWITCH MALFUNCTION DETECTOR®

• PREVENTS COSTLY DAMAGE

. . . by monitoring vibration or "roughness" of operation. ANTICIPATES TROUBLE and prevents costly damage. Available with control unit which ignores starting vibration and temporary disturbances.

APPLICATIONS

- Pumps and Motors.
- Cooling tower fans.
- Compressors and blowers.
- Gas and diesel engines.
- Turbines.

patent pending

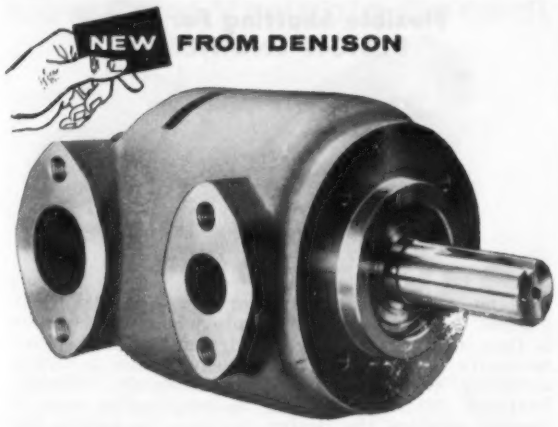
Robertshaw-Fulton CONTROLS COMPANY

FIELDEN INSTRUMENT DIVISION

Dept. F, 2920 North 4th Street, Philadelphia 33, Pennsylvania

For more details circle NED-851 C7 on enclosed inquiry slip

NEW FROM DENISON



CONTINUOUS 2000 PSI in a rugged, versatile vane-type HYDRAULIC PUMP

Ideal for mobile equipment . . . for special machinery . . . for automation. Fully balanced vanes and rotors assure peak efficiency, long life, minimum maintenance. Trouble-free starting under any weather conditions. Easily adapted to existing designs. Complete engineering details in Bulletin 200. Circle reader service card, or write:

DENISON HydrOIlics

DENISON ENGINEERING DIVISION
American Brake Shoe Co.
1192 Dublin Road, Columbus 16, Ohio

For more details circle NED-852 C7 on enclosed inquiry slip

"Lightnin" Mixers

Mix fluids **IN SECONDS**

Mix fluids rapidly, thoroughly, in any open tank or container, with a LIGHTNIN Portable Mixer. *Costs less and gives better results than hand stirring.*

Fast, simple—Just clamp on vessel or on any convenient support. You can instantly adjust a LIGHTNIN Portable to the correct mixing angle.

Versatile—Handles all fluids. Gives you your choice of rapid tumbling-rotating mix; slow rolling-washing action; or vortex for drawing down and wetting fine powders.

Fully guaranteed to mix quickly, completely. Thousands in use everywhere. Many in service 20 years and more.

Widest choice of materials, motors. Thirty models, ⅛ to 3 HP. Electric or air motors, direct drive, gear drive. Standard replaceable components always in stock.

Write for free recommendation. Just tell us what you want to mix, batch shape and size, results you want and how fast you want them.

Get helpful tips on fluid mixing, and full description of LIGHTNIN Portable Mixers, in 32-page Catalog B-108. Just check the reader service slip, or write direct for a copy.

MIX BIG BATCHES at low cost with turbine-type LIGHTNIN Mixers. For open or closed tanks; top or bottom entering. Hundreds of standard power-speed combinations. Sizes 1 to 500 HP. Send for Catalog B-102.

MIXING EQUIPMENT Co., Inc.
165-c Mt. Read Blvd., Rochester 11, N.Y.
In Canada: Greey Mixing Equipment, Ltd., Toronto 10, Ont.

For more details circle NED-853 C7 on enclosed inquiry slip

New Processes & Materials

TEFLON TUBING
for electrical and industrial use

Spaghetti tubing with thin and standard walls, flexible tubing, rod and heavy-wall tubing made of Teflon are available in custom-cut lengths to meet specific needs for aviation, electronic, electrical, automotive and industrial applications. Parts are production cut, clean and square, without feathers or flattening. Any length from ¼-in. up can be supplied. Teflon has excellent electrical properties, chemical inertness to most solvents, low coefficient of friction and a service temperature range from −455 to 550° F. Offered by **Pennsylvania Fluorocarbon Co.,** 1115 N. 38th St., Philadelphia 4, Pa.

For more details circle NED-854 C7 on enclosed inquiry slip

MOLYBDENUM LUBRICANT
used as dry film or in grease, oil

Galling and seizing at bearing pressures over 100,000 psi can be prevented by use of Molylube No. 16-Microfine, a treated molybdenum disulfite powder with particle size of less than 1 micron. It has high film strength, low coefficient of friction and tenacious adherence to metal surfaces. In pure powder form it is used as a dry film lubricant. It can also be dispersed in oils and greases to increase their extreme pressure properties. Made by **Bel-Ray Co.,** Dept. 103 Madison, N. J.

For more details circle NED-855 C7 on enclosed inquiry slip

SILICONE RUBBER PACKING
resists sunlight, aging and ozone

Among silicone rubber packing materials available are diaphragms, gasketing, sheet packing, oil seals, rings, insulation tape and rod and valve stem packing. It is also offered in sponge and in molded, extruded, die cut and metal-bonded shapes. Material has a wide variety of applications as it resists aging, sunlight, chemicals and ozone, has low compression set, withstands temperatures from −70 to 500° F and has good dielectric properties. Sponge material is flexible down to −100° F and is offered in sheets from 1/16 to ½-in. thick and in extruded round cross-sections from ¼ to ¾-in. diameter. Made by **Garlock Packing Co.,** Dept. NED, 402 Main St., Palmyra, N. Y.

For more details circle NED-856 C7 on enclosed inquiry slip

1500 BENDS PER HOUR
THE WORLD'S FASTEST TUBE BENDER

NEW! Sensational BEND-EX MODEL B-4

ECONOMICAL! COMPACT!
Bends all metal tubing of steel, aluminum, brass, copper, stainless steel

This compact bench model is not only the fastest, but the most economical bender ever built. Ideal for both mass production and custom quantities. So simple—anyone can operate. Heavy duty construction! Guarantees QUALITY, speed and low cost.

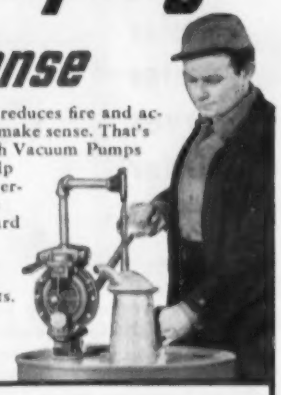
Adaptable to all Bending Requirements
- AIRCRAFT
- AUTOMOTIVE
- PLUMBING
- TOYS
- FURNITURE
- AIR CONDITIONING
- REFRIGERATORS
- METAL CABINETS

WRITE FOR DETAILS

MACHINE TOOL DIVISION OF
PAUL MACHINE TOOL & DIE WORKS
4600 SOUTH KEDZIE DEPT. B-4
CHICAGO 32, ILLINOIS

For more details circle NED-857 C7 on enclosed inquiry slip

Pumping makes sense



Any plant improvement that reduces fire and accident hazards certainly does make sense. That's the case when Tokheim High Vacuum Pumps are put into service. They help prevent spilling, slopping, overfilling and dripping. Operate on both forward and backward strokes—deliver 20 gallons per 100 strokes. Available with hose or spout outlets and other optional attachments.

Call your dealer or Tokheim representative; write for literature and approved list of liquids.

QUALITY TOKHEIM HIGH VACUUM HAND PUMPS

pump many liquids
Acetates • Alcohols • Aromatic Solvents
Chlorinated Solvents • Glycols • Ketones
and Ethers • Petroleum Products & Solvents • Plasticizers • Water and Others.
Alternate parts for special liquids

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Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.

For more details circle NED-858 C7 on enclosed inquiry slip

Tempilstiks°
FOR ALL HEAT-DEPENDENT OPERATIONS . . .
looks like a crayon
marks like a crayon
tells temperatures like a precision instrument

Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000°F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures — plus or minus 1%.
Also available in liquid and pellet form . . . Write Advertising Division for sample TEMPIL° pellets. . . State temperatures of interest — please!

Tempil°
CORPORATION
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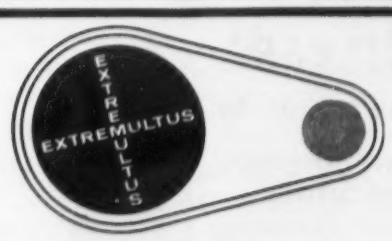
Visit us at Booth 629—April 9-11—Welding Show—Philadelphia, Pa.
For more details circle NED-859 C7 on enclosed inquiry slip



NO DRIVE TOO TOUGH!

In its first year on the U. S. market,
EXTREMULTUS BELTING,
a laminate of leather and plastic, is out-performing and replacing existing V-belts, chains and flat belts everywhere!

- Speeds up to 10,000 feet per minute!
- Ratios as high as 20:1, with arcs of contact as low as 90°!
- Unexcelled elasticity — soaks up shock!
- From 1/10 to 6000 HP!
- Runs on standard pulleys!
- Greatly reduced bearing loads!
- Freedom from stretch eliminates take-up!
- Widths a fraction of belts replaced!

Immediate delivery from stock on standard sizes

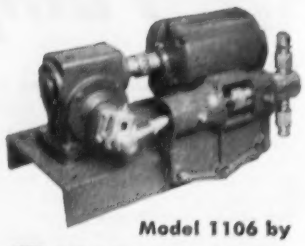
Name your drive problem — let EXTREMULTUS solve it! Write *today!*

EXTREMULTUS, INC.
405 Lexington Ave., New York 17, N.Y.

For more details circle NED-860 C7 on enclosed inquiry slip

Your boiler water deserves better treatment

and here's how!



Model 1106 by

PROPORTIONEERS

This proportioning pump accurately feeds all chemicals (alkaline, neutral *or* acid!) required for raw water and internal steam boiler water treatment . . . for capacities from 0.11 to 35.6 GPH for discharge pressures up to 1100 psig. PROPORTIONEERS, INC. offers with this pump a guaranteed volumetric accuracy within ±1% . . . from maximum to 1/15 of maximum displacement. Features interchangeable measuring cylinders, unique Vane-Guide check valves, and percentage calibrated stroke-length scale. Bulletin 1106-2 gives complete details. Write to **PROPORTIONEERS, INC.**, 425 Harris Avenue, Providence 1, R. I. . . . division of

PROPORTIONEERS, INC.
DIVISION OF
B-I-F INDUSTRIES
PROVIDENCE, RHODE ISLAND
METERS FEEDERS CONTROLS

For more details circle NED-863 C7 on enclosed inquiry slip

TOUGH ENOUGH TO SAVE YOU PLENTY

5X272
All-purpose Glove

A real tough chrome tanned cowhide glove — to take the toughest going on rough jobs. Gives far greater protection than average leather-faced gloves and users report many times longer wear over ordinary cotton gloves. All seams securely stitched. Wing thumb, reinforcing web welt at thumb crotch. *Flat* double stitched seam at base of palm. Palm and thumb extended down cuff (no pull patch). Leather tips on backs of fingers . . . 2 inch rubberized cotton cuffs, tape bound. Back of canton fleece. Palm lined. One of a line of American Optical All-Purpose gloves that give *more* in protection and service. Your nearest American Optical Safety Products Representative can supply you. / (same glove with 4" cuff — 5x273)

American Optical COMPANY
SAFETY PRODUCTS DIVISION

Always insist on Trademarked Safety Products

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES

For more details circle NED-864 C7 on enclosed inquiry slip

"SILVER"
PAPER SHREDDERS FOR COST-CONSCIOUS EXECUTIVES

USED IN THOUSANDS OF PLANTS TO REDUCE PACKING COSTS

TRY THE "SILVER 13-C" FOR 10 DAYS—FREE!

Reduce your packing material costs as much as 40% by shredding your own paper. The "Silver 13-C's" fast, efficient, low-cost operation and many new mechanical improvements make it the fastest-selling Shredder in the industrial field. 7 other models available, too, depending on your needs and capacity desired. 10-day free trial in your own plant. Write for helpful data on how you can cut your packing costs . . . at the same time, dispose of excess paper materials.

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

For more details circle NED-865 C7 on enclosed inquiry slip

New Literature & Catalogs

Unit Heater Handbook

American Blower Corp.—Vest-pocket edition of the "Venturafin Unit Heater Handbook 9417" is a handy source of unit heater information for on-the-job calculations or conferences. It contains specifications and operating characteristics as well as installation and application data for the complete Venturafin line. Step-by-step solution to typical selection problem is featured.

For more details circle NED-866 C7 on enclosed inquiry slip

Electronic Products

Superior Tube Co.—Revised 20-page catalog 51 incorporates up-to-date information on cathodes and other tubular electronic parts. Information has been included on standard and miniature disk cathodes. Analysis and properties data are provided on 11 cathode nickel alloys, glass sealing alloys and alloys for fabricated tubular parts.

For more details circle NED-867 C7 on enclosed inquiry slip

Automatic Control

Minneapolis-Honeywell Regulator Co., Industrial Div.—The electric, electronic and pneumatic controls described in 12-page catalog are representative of a line of over 9000 standard types. Controls for temperature, pressure and humidity; flame safeguard system; industrial motors; relays; dampers and operators; and panels and cubicles are covered.

For more details circle NED-868 C7 on enclosed inquiry slip

Electronics Equipment

Burstein-Applebee Co.—Equipment for radio, electronics and television are listed in the 172 pages of 1957 catalog 571. Many new items are listed for the first time, as are 21 pages of "bargains."

For more details circle NED-869 C7 on enclosed inquiry slip

Reciprocating Pumps

Gray Co. — Air-powered Powerflo reciprocating pumps for pumping practically any pumpable materials from light fluids to viscous mastics directly from original containers, are subject of illustrated catalog 453. Four series have varying power ratios. Other uses described in its 44 pages are paint circulating systems, spraying and extrusion applications.

For more details circle NED-870 C7 on enclosed inquiry slip

Abrasive Wheel Safety Code

Recently approved revised edition of the 1947 Safety Code for the use, care and protection of abrasive wheels presents the latest information on this subject. Many changes in content have been made in the interest of technological advances, appearance and ease of use. Covered are handling, storage and inspection; general machine requirements; safety guards; flanges; mounting; speed; and general operating rules. It has 74 pages and is illustrated. Available from Grinding Wheel Institute, 2130 Keith Bldg., Cleveland 15, O.

For more details circle NED-871 C7 on enclosed inquiry slip

Barrel Finishing Equipment

Casalbi Co., Globe Div.—Information on different types of abrasive and burnishing media and necessary compounds is given in 20-page illustrated general catalog. Six variables in barrel finishing are discussed, and before-and-after photos are included. Equipment for grinding, deburring, descaling, polishing, burnishing and drying is covered.

For more details circle NED-872 C7 on enclosed inquiry slip

Power Squaring Shears

Niagara Machine & Tool Works—74 pages of bulletin 69G present information on entire Niagara line of underdrive power squaring shears. Features described are multijaw sleeve clutch, rigid box type construction, self-compensating holddown, enclosed drive, four-cutting-edge knives and self-measuring back gage. Capacities range from 16 gage to 1-in. mild steel, 4 to 20 ft long.

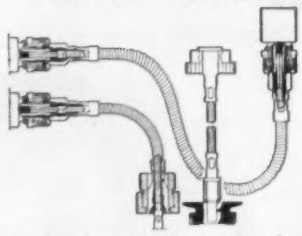
For more details circle NED-873 C7 on enclosed inquiry slip

Valve Selection Guide

Lunkenheimer Co.—"Guide for Selecting Valves, Boiler Mountings, Lubricating Devices" is title of thumb-indexed catalog No. 555. Complete data are given on globe, needle, disk and other valves in wide range of materials and constructions for all types of service. Also covered are safety valves, air nozzles, liquid gages, relief valves, cocks, lubricators and hand oil pumps.

For more details circle NED-874 C7 on enclosed inquiry slip

Flexible Shafting For The DESIGN ENGINEER



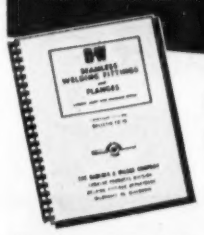
Designs may be improved or developed to their highest degree of efficiency only when the engineer is free to place his drive or driven units wherever necessary in order that he may save space, facilitate servicing, or provide for easier assembly. Flexible Shafting utilized within or in conjunction with a product enables the design engineer to reduce the number of parts, economize on space, and simplify the grouping of working units. He is able to do this because of the ability of flexible shafting to transmit power over, under, and around obstacles between the drive and driven units.

A good example of this is the above illustration. Although this diagram represents a small, compact unit, obstacles in the path of the shafts would present no serious problem to the designer. The shafts merely curve around the obstacles. When the unit is in production, none of the shafts have to be aligned; they are merely fastened to their respective units by ferrules on each of the shafts.

For complete information concerning Flexible Shafting, write on your letterhead to **F. W. Stewart Corporation,** 4311-13 Ravenswood Avenue, Chicago 13, Illinois.

For more details circle NED-875 C7 on enclosed inquiry slip

FOR ENGINEERS WHO SPECIFY
WELDING FITTINGS AND FLANGES



B&W Welding Fittings Catalog
FB-76 CONDENSED

Here's an extremely helpful catalog that contains 165 pages of physical data on the complete range of grades, types, sizes and pipe schedules of all B&W Welding Fittings and Flanges.

Send for Bulletin 76 on your company letterhead or ask your distributor

The BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION • FITTINGS DEPARTMENT
2839 W. BURNHAM STREET • MILWAUKEE 46, WISCONSIN

THE NATURAL SOURCE FOR ALLOY FITTINGS

B&W TUBULAR PRODUCTS DIVISION

FA-7913-FL2

KLIXON
SNAP ACTING THERMOSTATS

USED AS *Standard Controls* on JANITROL Unit Heaters

Janitrol Unit Heaters, manufactured by the Janitrol Heating and Air Conditioning Division of Surface Combustion Corporation, are recognized by industry as outstanding for their unusual durability, and during the past 25 years have earned an enviable reputation for customer satisfaction.

Janitrol uses KLIXON Temperature Controls to limit the metal temperatures of the heat exchangers in these unit heaters. Here's what they have to say about KLIXON Controls.

"Many thousands of KLIXON Temperature Controls have been used as standard overheat controls on Janitrol Unit Heaters for twelve years. They have given satisfactory, dependable service."

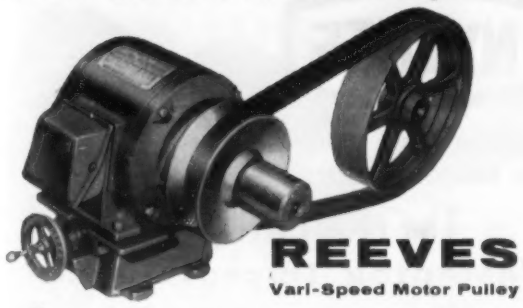
A wide variety of KLIXON Controls, available in hermetically sealed and open types with heavy duty ratings and fixed temperature settings, are successfully meeting difficult requirements in hundreds of military and civilian applications daily.

Why not investigate and see what these simple, inexpensive controls have to offer you in the way of dependable long-life performance? Our Field Engineers will gladly drop in and help you work out application details if you wish — or write us here at the factory if we can assist you in any way. No obligation, of course.

Metals & Controls Corporation
SPENCER THERMOSTAT DIVISION
3301 FOREST STREET, ATTLEBORO, MASS.

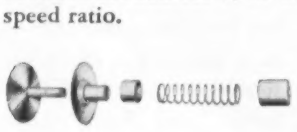
For more details circle NED-876 C7 on enclosed inquiry slip

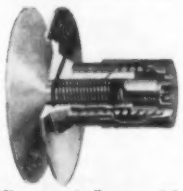
Low Cost Variable Speed!



REEVES
Vari-Speed Motor Pulley

A compact, low-cost variable speed drive that widens machine range . . . adds flexibility. Fourteen models for ⅛ to 15 hp; 1.75:1 to 4:1 speed ratio.





Easy maintenance . . . long life!

Just 5 simple parts.

REEVES "Close-grooving"—a special lubrication system—insures free sliding disc for easy speed changes.

For bulletin, complete with rating charts, write Dept. ND21e-V545

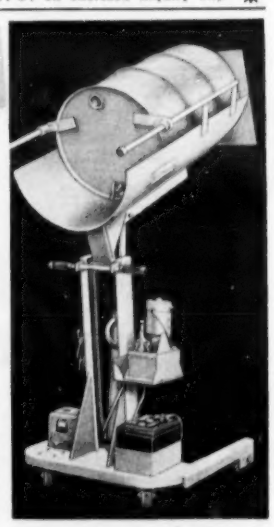
REEVES PULLEY COMPANY
Division of RELIANCE Electric and Engineering Co.
COLUMBUS, INDIANA

For more details circle NED-877 C7 on enclosed inquiry slip

Tubar DUMPERS

EMPTY HEAVY CONTAINERS
faster . . . easier . . . safer . . .

Lifting capacities to 2000 lbs.! Designed to dump barrels, kegs, and drums . . . easily adapted to handling skids, pallets, and other bulky units. Choose electric or manual hydraulic lifts. Immediate delivery on all production models. Built-to-order units also available.



Electric models operate on standard 6 or 12 volt auto batteries. Manual models have double-acting, variable stroke hydraulic pumps.

90-DAY GUARANTEE

Write for brochure with complete specifications.

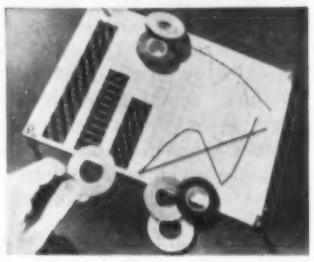
U-157-27 A

Tubar DUMPER DIVISION
uhrden, inc.
DENNISON, OHIO
Tubar ASSURES QUALITY

For more details circle NED-878 C7 on enclosed inquiry slip

New Processes & Materials

SELF-ADHESIVE TAPES for graph and chart making



Self-adhesive acetate fiber tapes offered in various widths, colors and designs can be used in producing neat, attractive, easily reproduced graphs and charts. Tapes are rapidly applied to almost any surface. Narrower widths can be curved. Once made, graphs can be changed by peeling off and replacing the tape, available in 15 colors, 6 widths and 9 different striped designs. Widths range from 1/32 to 1 in. They are wound on Aeroflex flexible plastic core tubing which has a smooth, waxy finish for ease of dispensing. Made by **American Chart Service, Inc.**, Box 183, Somerville 44, Mass.

For more details circle NED-880 C7 on enclosed inquiry slip

PLASTIC COMPOUND lead filled for shielding purposes

Homogeneous castings suitable for use in radioactive shielding or high density molding compounds are produced from Leadolene, a lead filled polyethylene plastic compound. It is composed of 95 per cent lead by weight and 5 per cent polyethylene. Specific gravity of 7 gr per cubic centimeter can be altered by changing the material ratio. Compound is melted at 220° F into a low viscosity liquid for pouring into simple casting forms. Surface is smooth and resistant to corrosion. Cast pieces can be remelted and used again. compound dissolves in certain solvents, has high chemical inertness and can be joined only by melting the edges together or pouring liquid Leadolene in the joints. Made by **Telectro Industries Corp.**, Dept. L-100, 35-18 37th St., Long Island City 1, N. Y.

For more details circle NED-881 C7 on enclosed inquiry slip

ALUMINUM IMPACT EXTRUSIONS surface cladding expands usage

Thin surface cladding now available on aluminum impact extrusions provides cathodic corrosion protection and facilitates finishing and joining. Applications made feasible by cladding include water filters, small water tanks, steam traps, electrical cases, hot water heater fittings and process operations. Rearrangement of aluminum slugs, changes in die tool design, variations in extrusion pressures and other technical advances make cladding possible. Clad extruded parts are protected by the coating even when slight surface imperfections exist. Extrusions offered by **Aluminum Co. of America**, Dept. NED, 1501 Alcoa Bldg., Pittsburgh 19, Pa.

For more details circle NED-882 C7 on enclosed inquiry slip

NOW...to handle those difficult PIPING PROBLEMS

JOHN CRANE

offers a complete line of BELLOWS *Made of Teflon* to provide Chemical Inertness...Long-Life Flexibility ...Elimination of Electrolysis...Operation Over Wide Temperature Range*

"John Crane" Bellows offer a positive answer in the transmission of "hard-to-handle" liquids and gases. Applications include vibration dampeners, expansion joints and connectors for misaligned couplings.

Made from a special densely molded stock and so machined that there is no inherent stress at their free length—*they expand and contract with equal freedom of motion.* End flanges of French-type gasket construction facilitate easy assembly and assure a leak-proof seal. Available in a full range of standard pipe dimensions from 1 to 8 in.

Bellows also available in a wide range of designs for metering pumps, pressure accumulators, batching scale connectors, etc.

Send now for full information, including illustrated catalog, *The Best in Teflon.* Crane Packing Co., 6411 Oakton St., Morton Grove, Ill., (Chicago Suburb). **Du Pont trademark*

JOHN CRANE CRANE PACKING COMPANY
In Canada: Crane Packing Co., Ltd., Hamilton, Ont.

For more details circle NED-883 C7 on enclosed inquiry slip

The powerful all-purpose Cadillac Quick-Vac makes fast work of cleaning jobs from floor to ceiling. It cleans floors (bare or carpeted) . . . picks up water . . . rids machinery and equipment of damaging dust and dirt.

Vacuums · Blows · Air Sweeps · Sprays

Two-speed power unit can be instantly demounted for use as a hand-type blower-suction cleaner.

EXCLUSIVE 2-SPEED MOTOR (to fit job requirements)

EXCLUSIVE 3-IN-1 HOSE COUPLER* Only *one* swivel connector is required to connect the hose to the dirt container, or to the power unit inlet or outlet. Saves you time, trouble, money.

DOZENS OF ATTACHMENTS (optional equipment) are available for handling hundreds of cleaning, maintenance, and production jobs.

The Clements-Cadillac line also includes:
- A 2-speed portable blower-suction cleaner and three other job-rated models
- Hot and cold air blower
- Furnace blowers
- Gas blowtorch

See your nearest dealer in Industrial, Automotive, or Janitors' Supplies —or write us direct.

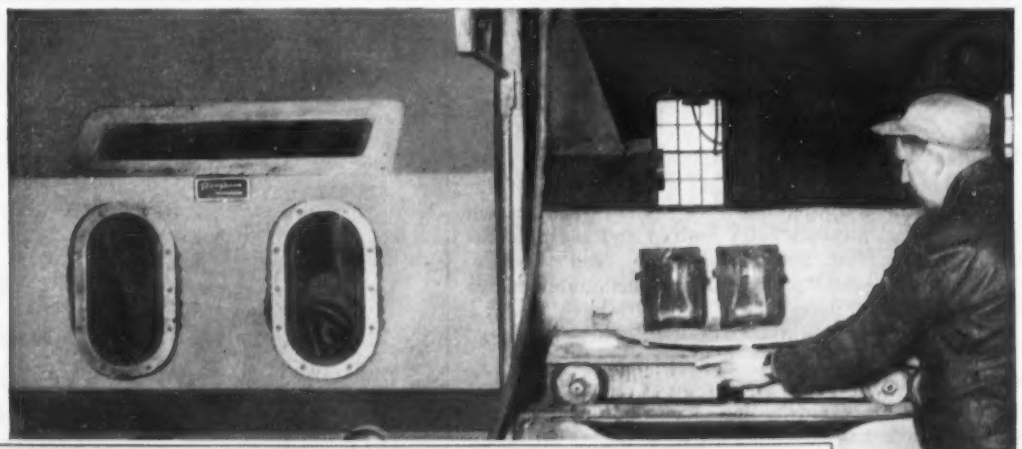
Several territories are available to verified factory representatives.

**Pat. applied for*

Industrial Vacuum Cleaner Division
SINCE 1919 CLEMENTS MFG. CO., 6627 S. Narragansett Ave., Chicago 38, Ill.

World's largest producer of blower-suction cleaners . . . specialists in vacuum cleaning equipment for home, business and industry

For more details circle NED-884 C7 on enclosed inquiry slip



Pangborn Hydro-Finish cut cleaning time 50% in this plant
Paid for itself in only six months

Pangborn Hydro-Finish really paid off for this leading glass manufacturer. Cleaning quality increased moldlife 10% to 15% and total cleaning and polishing time was cut in half! The resultant savings paid for the machine in six months and represented a substantial weekly sum thereafter.

Today, through new design and use of air jet sluriators, Pangborn Hydro-Finish costs less originally, costs less to maintain and gives you easier handling and added efficiency. Write for Bulletin 1403 to PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.

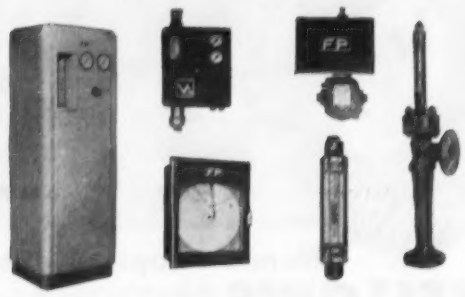
USE PANGBORN HYDRO-FINISH FOR:
Deburring • Surface finishing • Finishing threaded sections • Improving cutting tool life • Maintaining dies and molds • Removing grinding lines • Removing heat treat scale • Preparing surfaces

Pangborn
BLAST CLEANS CHEAPER

For more details circle NED-879 C7 on enclosed inquiry slip

for your convenience . . .

OFF-THE-SHELF DELIVERY OF PROCESS CONTROL INSTRUMENTS

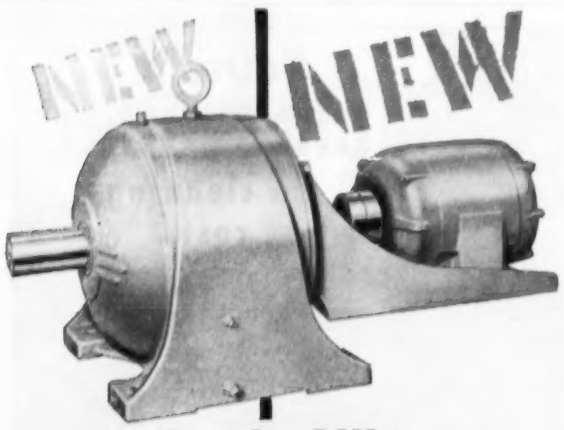


To save you time on the delivery of vital process control instruments—Fischer & Porter offers an *extensive immediate delivery policy* on a wide variety of flowmeters, transmitters, indicators, recorders, controllers, and chlorinators. In 1956 alone, 18,000 customers took advantage of this unique, carefully planned, standardization program to get Fischer & Porter quality *and* fast delivery too!

• **Write today for Catalog 2, covering complete prices and specifications on these standardized control instruments. Address request to Fischer & Porter Company, 3537 County Line Road, Hatboro, Pa.**

FP FISCHER & PORTER COMPANY
Complete Process Instrumentation

For more details circle NED-885 C7 on enclosed inquiry slip



Louis Allis LINE-O-MOTOR

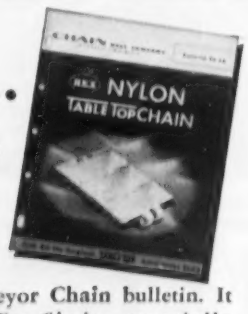
Louis Allis LINE-O-MOTOR is a motorized gear reducer built to accommodate motors of any speed or enclosure.

LINE-O-MOTOR is available in ratings from 1 to 75 hp., double and triple reductions with ratios from 5.06 to 230:1, in both foot- and vertical flange-mounted styles. Write to the Louis Allis Company, 436 East Stewart Street, Milwaukee 1, Wisconsin.

LOUIS ALLIS

For more details circle NED-886 C7 on enclosed inquiry slip

NYLON TABLETOP... if you need a dry-running conveyor



Send for the new Rex Conveyor Chain bulletin. It describes Rex *Nylon TableTop Chain*—especially developed for the smooth, clean transferring of cans, packages, jars, heavy-duty bottles, etc. The catalog contains many pages of conveyor engineering data, and also the advantages and applications of the other Rex "Flat-Top" Conveyor Chains. Mail coupon now.

CHAIN BELT COMPANY
Milwaukee 1, Wisconsin

CHAIN Belt Company
4686 W. Greenfield Ave.
Milwaukee 1, Wis.

Please send me Conveyor Chain Bulletin 56-60.

Name.....
Company.....
Address.....
City.....*State*.....

For more details circle NED-887 C7 on enclosed inquiry slip

New Literature & Catalogs

Oil Seals

Victor Mfg. & Gasket Co.—60-page illustrated catalog 305 is reference manual on oil seal engineering. Shown are standard designs available in metal OD and rubber elastomer OD oil seals. Specific recommendations are given on design adaptability in relation to pressure, temperature and shaft speed conditions. Chart gives general service characteristics on typical fluids. Proper installation is described, also. Specifications are given on complete range of types and sizes.

For more details circle NED-888 C7 on enclosed inquiry slip

What Edgewater Offers Industry

"What Edgewater Offers Industry" is title of 12-page brochure aimed at industrial realtors which discusses frankly what this New Jersey industrial community has to offer companies contemplating new plants. Location and labor supply; transportation facilities; power, water and waste facilities; taxes; local government; and the community itself are covered. An appendix to the booklet provides pertinent details about major properties available. Write to: Industrial Committee, Edgewater, N. J.

For more details circle NED-889 C7 on enclosed inquiry slip

Pneumatic & Hand Chisels

Bedford Tool & Forge Co.—16-page illustrated catalog standardizes "Pneumatic and Hand Chisels" by point style, body size and shank type. Pneumatic chipping chisels from 5/8 to 7/8-in. bodies in 12 point styles are shown. Also cataloged are round and oval collar retainer styles from 1/2 to 7/8 in. Tool reconditioning methods are emphasized.

For more details circle NED-890 C7 on enclosed inquiry slip

Adjustable Autotransformers

General Radio Co.—24 fact-filled pages are provided in bulletin 0 on Variac adjustable autotransformers, offered in portable types with overload protection, motor drives, enclosed units and ball bearing models. Output voltages from the Variac are from 0 to 117 per cent of line voltage. Units feature the Duratrak contact surface which eliminates oxidation problems.

For more details circle NED-891 C7 on enclosed inquiry slip

Precision Measuring Tools

Reska Spline Products Co.—Company's complete services to metalworking industries are outlined in this 4-page catalog and file folder. Precision measuring tools pictured along with company facilities include involute spline, serration and straight spline gages; master gages; spur and helical gears; work and inspection arbors; punches and dies; and snap and contour gages.

For more details circle NED-892 C7 on enclosed inquiry slip

General Purpose Pushbuttons

Furnas Electric Co.—32-page catalog 5606 on oil tight and general purpose pushbuttons, pilot lights and accessories tells how to select the right pushbutton for every application. Components and complete units, dimensions, cam action and schematic diagrams are covered. Oil-tight units have all metal liquid-tight actuators to withstand severe mechanical wear.

For more details circle NED-893 C7 on enclosed inquiry slip

Stainless Steel Fasteners

Allmetal Screw Products Co.—"AN" is title of 12-page bulletin descriptive of government specification stainless steel aircraft bolts, slotted and Phillips machine screws, flat and round rivets, and washers. Stock sizes, dimensions, and part and dash numbers are included for each item.

For more details circle NED-894 C7 on enclosed inquiry slip

Oil-Tight Pushbuttons

Cutler-Hammer, Inc.—Line of oil-tight pushbuttons which affords back-of-panel depth of only 1 23/32 in. for transformer types and 1 7/8 in. for resistor units is descriptively covered in 26-page brochure EL-178. Units are offered in key-operated, selector switch, flush button, mushroom head or knob-operated models. Each has neoprene diaphragm seal for oil-tightness.

For more details circle NED-895 C7 on enclosed inquiry slip

Wire Partitions & Enclosures

Wire & Iron Products Inc.—An economical approach to plant layout problems involving partitioning and enclosing is dealt with in 8-page bulletin P-55 on wire partitions and custom enclosures. Panels are complete units in themselves and are interchangeable and movable. Specifications are tabulated.

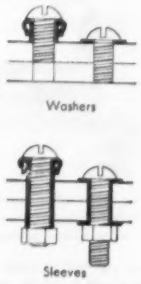
For more details circle NED-896 C7 on enclosed inquiry slip

NYLTITE®

"controlled flow" nylon washers and sleeves

The MODERN Fastening Improvements

- Dampen effect of vibration
- Form air-tight, leak-proof seal
- Prevent electrolytic corrosion
- Sleeves provide electrical insulation
- Provide excellent bearing surface and prevent galling



Slip NYLTITE washer or sleeve over bolt, screw, nail or rivet and tighten — compressive force "cold flows" sleeve around threads and under head sealing fastener. NYLTITE washers and sleeves available in wide range of sizes to fit any size screw.

Send for samples and literature today

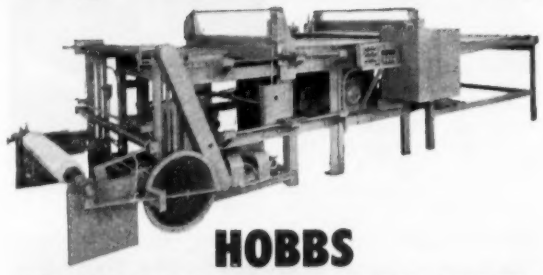
Pat. Pend.

NYLTITE CORPORATION of America
2331 Morris Avenue, Union, New Jersey

For more details circle NED-897 C7 on enclosed inquiry slip

HOBBS

AUTOMATES Engineered Cutting

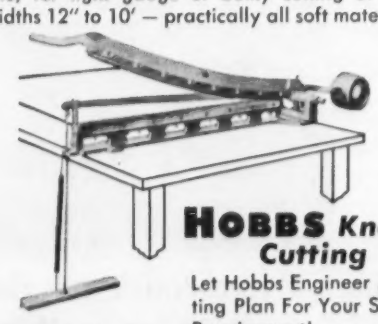


HOBBS AUTOMATIC PRODUCTION CUTTER
Electronically Controlled For Speed and Accuracy

Combine your feeding, guiding, slitting, measuring, cutting and conveying — also stacking if desired — in one automatic operation. This machine takes materials from rolls or from a preceding process by synchronization. Also semi-automatic models.

HAND SHEARS

Bench or table models, including famous Jacques line, for light gauge or bulky cutting of web widths 12" to 10' — practically all soft materials.



HOBBS Knows Cutting

Let Hobbs Engineer A Cutting Plan For Your Specific Requirement!

HOBBS EST 1882

Send a sample of the material you are cutting plus complete job information.

MANUFACTURING COMPANY
41C Salisbury St., Worcester 5, Mass.

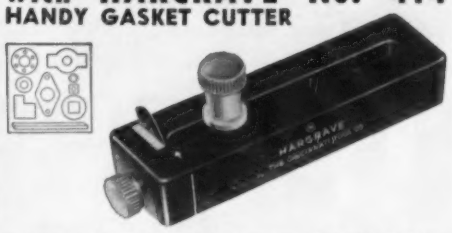
Representatives in Irvington, N. J.; Chicago, Ill.; Cleveland, Ohio; Greenville, S. C.; Toronto, Ont.

WINDERS • HAND & POWER SHEARS • DIE PRESSES
SLITTERS • CORNER CUTTERS

For more details circle NED-898 C7 on enclosed inquiry slip

HARGRAVE Tested Tools THE CINCINNATI TOOL COMPANY

Cut your own precision gaskets with HARGRAVE No. 414
HANDY GASKET CUTTER

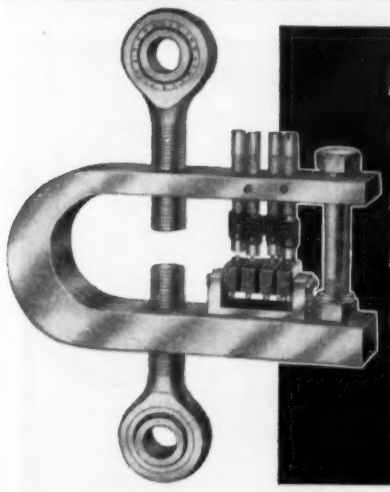


HARGRAVE No. 414 Handy Gasket Cutter, hand operated—with inch and metric scales for direct reading. Phenolic body with steel blades. Cuts ¼" to 6" round gaskets, odd shapes and straight pieces any size from every pliable sheet material.
No. 415 Hargrave Extension Gasket Cutter with aluminum body, steel blades will cut precision round gaskets from 1" to 13" (¼" to 13¾" with use of offset pivot post).

WRITE FOR FREE CATALOG
Showing a Clamp for every purpose, openings from ¾" to 12' and depths from 11/16" to 16", also Chisels, Punches, Masonry Drills for hand and power hammers, Carbide Tipped Rotary Drills, Gasket Cutter, File Cleaners, etc.

THE CINCINNATI TOOL COMPANY
1995 Waverly Avenue, Cincinnati 12, Ohio
THERE IS AN INDUSTRIAL DISTRIBUTOR STOCK NEAR YOU

▲ For more details circle NED-899 C7 on enclosed inquiry slip ▲



Here's the NEW Dillon force control switch

- 6 Different Ranges: From 0-100 lbs. up to 0-50,000 lbs.
- Triggers motors, rings bells, operates warning devices, etc.
- Protected against accidental overloading.
- Tensile or Compression Models available.
- Furnished with from 1 to 4 adjustable switches for controlling forces at various load points.
- Can be set for most critical accuracy.

WHAT CAN IT DO FOR YOU?
Write for specifications, profusely illustrated literature and low price schedule . . . free!

W. C. Dillon & COMPANY, INC.
14578NE Keswick St. • Van Nuys 1, Calif.
"suburb of Los Angeles"

▲ For more details circle NED-900 C7 on enclosed inquiry slip ▲

This ONE COIL is all you need for most jobs!

The New

JE

MULTI-VOLTAGE COIL

Cuts Inventory Costs... Saves Time and Money

NOW—from Jackes-Evans—you can get *one* coil assembly to do the job of many . . . *one* coil that is equally suitable for 115/25, 115/50, 115/60, 208/50, 208/60, 230/50 or 230/60 circuits . . . *one* coil that successfully operates to control the flow of Water, Air, Light Oils, Freon 12 and 22 (liquid, hot gas, suction), Brine, Industrial Gas, 5 lb. Steam, etc . . . *one* coil that fits any standard "J-E" Solenoid Valve from 7/64" to 1½" port size and up to 225°F.

For further information on this outstanding development, write:

Controls Division JACKES-EVANS MFG. CO.
4427 Geraldine Ave. • St. Louis 15, Mo.

▲ For more details circle NED-901 C7 on enclosed inquiry slip ▲

New Processes & Materials

CERAMIC MAGNET
is permanent, high-energy material

Indox V oriented ceramic permanent magnet material produces an extremely high peak energy, and makes possible savings in both material and space. Peak energy of product is approximately 3.5 x 10^6. Light in weight, it has density of 0.181-lb per cu in. Coercive force is 2000 oersteds, and residual induction is 3840 gauss. Made of noncritical material, it has a resistivity on the order of 10,000 to 20,000 ohm-cm. Typical applications include direct current motors, synchronous drives, traveling wave tubes, loud speakers, magnetic clutches and compact tractive devices. Standard sizes available for developmental or experimental purposes include 1 x 2 x 0.4-in. wafers and three rings ranging up to 3.7-in. OD x 1.16-in. ID x 0.37-in. thick. Illustration shows comparative size of direct current motor electromagnetic field coil and the Indox V stator that may replace it. Made by **Indiana Steel Products Co.**, Dept. A, Valparaiso, Ind.

▲ For more details circle NED-902 C7 on enclosed inquiry slip ▲

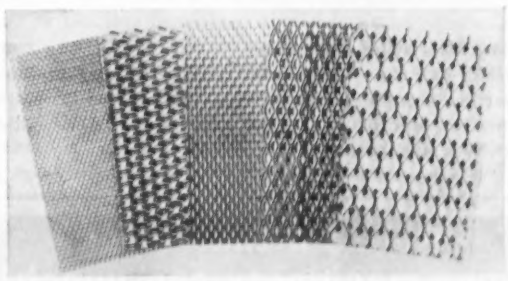
ASPHALT SURFACE TOPPING
retards oxidation caused by sun

Tropical Runway Topping for airport asphalt runways as well as other asphalt surfaces withstands damaging effects of weather, oil, grease and gasoline. It lengthens asphalt pavement life by retarding oxidation caused by actinic sun rays and prevents disintegration in cold weather by sealing surface against water. Topping will not soften under hot sun and is impervious to injury from freezing. It is completely resistant to gasoline, oil and petroleum solvents. Product gives excellent service on parking areas, roads, driveways, station platforms, and other interior and exterior asphalt surfaces. Made by **Tropical Paint Co.**, 1150-1300 W. 70th St., Cleveland 2, O.

▲ For more details circle NED-903 C7 on enclosed inquiry slip ▲

EXPANDED METAL MESH
with openings as small as 1/16-in.

Micromesh expanded metal is now available with openings as small as 1/16 in. up to 2½ in. Made in standard and flattened types which have almost un-



limited application, Micromesh can be made in aluminum in any color. Although diamond shapes are presently the basic pattern, square and tear-drop mesh openings are in development. Expanded metal can also be produced from steel, stainless steel, copper, brass, Monel and any standard sheet material. Made by **Designers Metal Corp.**, 497 E. 159th St., Harvey, Ill.

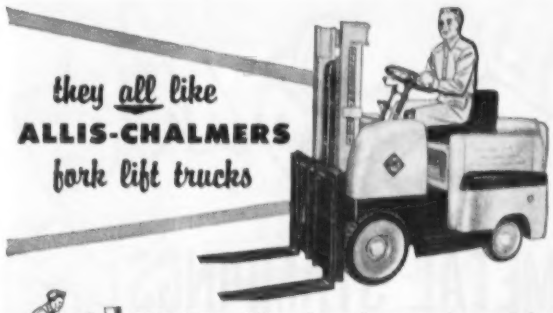
▲ For more details circle NED-904 C7 on enclosed inquiry slip ▲

EPOXY COATINGS
resist weather and corrosives

Used indoors and outdoors, Maraset gray enamel 750 and clear varnish V-760 will protect wood, metal, concrete, plaster, paper and plastics from adverse weather and wide range of chemicals. Enamel will protect piping and equipment from corrosive action of fumes, fluids, fuels, salt sprays and spillage. In latex dipping, it smooths finish of aluminum pattern duplicates and prevents development of pits. Varnish can be used to bring out wood grains, enhance appearance of decorative elements and waterproof bricks and plaster. Supplied with catalyzed thinner, both Maraset resins attain hardness and thickness at room temperature. Both can be brush or spray applied. Made by **Marblette Corp.**, Dept. NED, 37-31 30th St., Long Island City 1, N. Y.

▲ For more details circle NED-905 C7 on enclosed inquiry slip ▲

they all like **ALLIS-CHALMERS** *fork lift trucks*



OPERATOR: *"Must have been engineered for the driver,"* says the operator of an Allis-Chalmers fork truck at a midwest foundry. "Shifting is handy and I like where the controls are located."

SERVICEMAN: *"Finest truck from a mechanic's point of view,"* is the comment of a service manager for a lift truck fleet at a midwestern plant. "In over 3,000 hours of operation, the Allis-Chalmers truck has caused no trouble at all."

PRESIDENT: *"Would like you to know how well satisfied we are,"* writes the president of an eastern warehousing company. Operating up and down a steep ramp has caused exceptionally heavy clutch repair costs with older trucks, but not with an Allis-Chalmers truck."

See your dealer or write direct for more information on trucks to fit your needs.

MATERIAL HANDLING DEPT., BUDA DIVISION, MILWAUKEE 1, WIS.

ALLIS-CHALMERS A-C

BH-42

▲ For more details circle NED-906 C7 on enclosed inquiry slip ▲

PREVENT ACCIDENTS DUE TO HOLES, RUTS, CRACKS . . . WITH

SONOPATCH

Repairs floors in a matter of minutes without interfering with production!

Sonopatch is a quick, easy-to-use, fast-setting floor repair material that can be trucked over within one hour of patching. It attains a compressive strength that will support loads up to 10,000 lbs. . . . and will take loads under steel casters after 24 hours!

Sonopatch is a non-bituminous hydraulic material which combines with water to form an ideal rigid patching compound.

Use Sonopatch for: Repair of holes and cracks in concrete floors; setting of anchor bolts for light machinery; anchoring of hand rail supports; and a hundred other similar jobs!

A Product of Sonneborn RESEARCH

for over 50 years manufacturers of quality building products

MAIL COUPON FOR MORE FACTS!

L. SONNEBORN SONS, INC.
Building Products Division, Dept. NE3,404 Fourth Ave., New York 16, N. Y.
☐ Yes, I would welcome full information on Sonopatch
☐ Please see that I receive your Building Construction and Maintenance Handbook with 125 pages of important information.

NAME.....
COMPANY.....
ADDRESS.....
CITY.....STATE.....

▲ For more details circle NED-907 C7 on enclosed inquiry slip ▲

METAL STAMPINGS

Short Orders or Long Runs

We invite special order custom product metal stampings. We handle the entire job, from dies to heat treating. You may make a note that we are experts at fabricating and heat treating beryllium copper. Our charges are moderate, our quality is constant, and our service is unsurpassed.

Of course, we make springs, too. Write for our circulars on stock assortments.

Find Your Nearest Agent In The Yellow Pages

PARAGON SPRING COMPANY

4613-17 WEST FULTON ST. • CHICAGO 44, ILLINOIS

For more details circle NED-911 C7 on enclosed inquiry slip

die cast (not turned) for better appearance at **lower cost!**

GRC CAP NUTS

No tool marks or cut-off burrs mar the handsome appearance of Gries Zinc Alloy Cap Nuts. Die cast in one automatic operation, they cost less, too. Available in open and closed end types standard thread sizes from #4 through ⅝". Clean bright finish that needs no further finishing for most commercial applications; standard finishes available where desired

• Non-ferrous • Rustproof • Durable • Dependable

Write today for samples, prices and bulletin. Ask about GRC's other fasteners: Wing Nuts, Wing Screws, Thumb Screws, Thumb Nuts, Rivets.

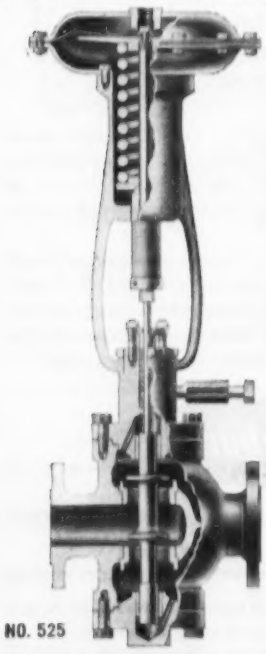
GRIES

GRIES REPRODUCER CORP.

World's Foremost Producer of Small Die Castings

143 Beechwood Ave., New Rochelle, N. Y., NEw Rochelle 3-8600

For more details circle NED-912 C7 on enclosed inquiry slip



NO. 525

HOW TO GET . . . Dependable Pressure Regulation

For Reducing and Pump Pressure Service

Design extras and quality construction are keys to superior performance of Masoneilan No. 525 direct operated regulators — for steam, gas or liquid service.

Check these plus features . . .

• Extra wide selection of ranges.

• Superfinished plug stem minimizes packing box friction.

• Heavy seat ring shoulder prevents distortion. Long threaded section assures tight joint.

• Hardened stainless steel bushings, supported full length in bonnet and blindhead, guide plug throughout full stroke with one guide diameter minimum engagement.

This valve is built with many of the quality features found in modern control valves — another Masoneilan plus. You can obtain Masoneilan Regulators from your local distributor or write:

MASON-NEILAN

Division of Worthington Corporation
69 Nahatan Street, Norwood, Mass.

A HIGH Quality PRODUCT

MASONEILAN

MN-6-11

Order from Your Masoneilan Distributor • Use His Experience • Save Work • Save Time

For more details circle NED-913 C7 on enclosed inquiry slip

New Literature & Catalogs

Lighting Systems

Wakefield Co.—Condensed data on luminous ceilings, modular lighting equipment, pendant mounted fixtures and high frequency lighting system are contained in 12-page illustrated 1957 catalog. Specifications and design factors are presented.

For more details circle NED-914 C7 on enclosed inquiry slip

Water Systems & Pumps

Deming Co.—Selection, performance and dimension tables on all sizes and types of water systems and commercial pumps are contained in 76-page illustrated catalog C-57. Accessories, repair parts and tools, including pressure gages and meters, are listed. General installation, wiring and other data are included.

For more details circle NED-915 C7 on enclosed inquiry slip

Heavy-Liquid Pumps

Tuthill Pump Co.—Type SU pump units, available with various motors and two or four V-belt drives, are suited for handling heavy fuel oils or any noncorrosive, highly viscous liquid with lubricating qualities. Described in 8-page illustrated catalog, they develop pressures up to 300 psi in capacities up to 2030 gph. Performance data are presented.

For more details circle NED-916 C7 on enclosed inquiry slip

Photographic Slide Rule

Flight Research, Inc.—Easy conversion of feet of film to running time, or the reverse, for all frame rates and film sizes, is possible with this slide rule. It speeds calculation of camera operating conditions in industrial applications where conditions vary widely.

For more details circle NED-917 C7 on enclosed inquiry slip

Portable Power Tools

Skil Corp.—Described and illustrated in 16-page 1957 Builders' Line portable power tool catalog are belt and oscillating sanders, power saws, drill kits with attachments, hedge trimmer, line of accessories, and portable electric jig saw which makes its own hole for pocket cuts. Specifications of each are given.

For more details circle NED-918 C7 on enclosed inquiry slip

Strain Gages & Accessories

Baldwin-Lima-Hamilton Corp.—Line of flat grid, fine pitch Bakelite strain gages for replacement of small wrap-around gage sizes, are among new products listed in price list on SR-4 strain gages, instruments and accessories. Discussion of gages and methods of using them is included.

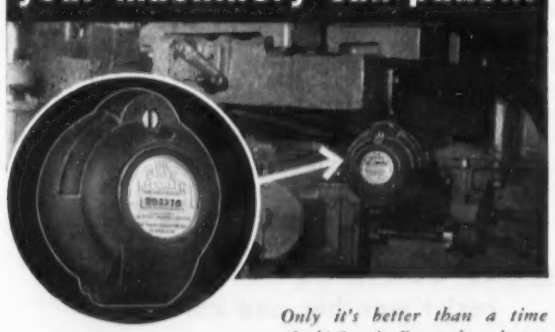
For more details circle NED-919 C7 on enclosed inquiry slip

Filing Microfilm & Slides

Nega File Co.—Catalog No. 22 and Filing Handbook describes complete line of files and associated equipment for microfilm, magazines, film strips, slides, negatives and prints.

For more details circle NED-920 C7 on enclosed inquiry slip

Here's a time clock your machinery can punch!



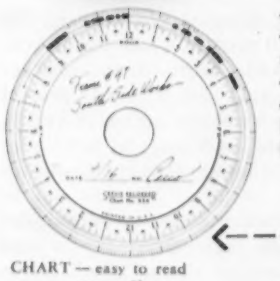


CHART — easy to read . . . easy to file.

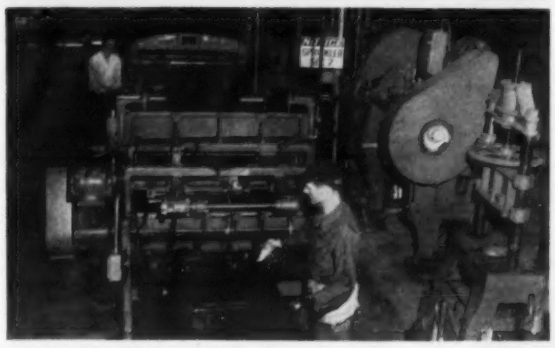
Only it's better than a time clock! Servis Recorder shows every minute of working time and loafing time your machinery puts in. Circular charts are recorded with fine lines for down time and wide bands for productive time.

With **SERVIS RECORDER** you know exactly how much work you get from every machine.

THE SERVICE RECORDER COMPANY

1013A Rockwell Ave., Cleveland 14, Ohio

For more details circle NED-921 C7 on enclosed inquiry slip



Low Cost! High Speed! *New* UNION SHEAR LINE

Versatile Union Shear Line works in conjunction with standard shear for automatic cutting operation. *Complete* Union Line decoils, flattens, measures and shears. Electrical cut-to-length operation; single-adjustment, manual operation optional. Holds commercial tolerances. Capacity: 10 gauge or lighter . . . widths up to 60 inches.

More than 3000 users are profiting from Union Tool Machines—we suggest you investigate. Send complete details for specific proposal.

THE UNION TOOL CORPORATION
WARSAW, INDIANA

318 North Market Street

For more details circle NED-922 C7 on enclosed inquiry slip

New model HA PAYLOADER® has one-lever bucket control

One reason why the new model HA "PAYLOADER" tractor-shovel can dig more, carry more and deliver more bulk materials than heavier machines with larger engines is the simple bucket control system. One lever, finger-tip operated, gives complete hydraulic control of the bucket — tip-back, raise, dump and lowering. Another more-productive feature is the built-in hydraulic shock absorber that cushions the load during travel. It reduces spillage and permits higher travel speeds.

The new-model HA has a bucket payload capacity of 18 cu. ft. (2,000 lbs.). Lift forks, floor sweeper, pusher fork and other attachments are available to increase its usefulness. Larger "PAYLOADER" models up to 2¼ cu. yd. payload are available for every need indoors or outdoors — made by the pioneer and leader in tractor-shovel manufacture. There's a nearby Distributor ready to give you full information. The Frank G. Hough Co., 746 Sunnyside Ave., Libertyville, Ill.

47

PAYLOADER®

MANUFACTURED BY THE FRANK G. HOUGH CO. LIBERTYVILLE, ILL.

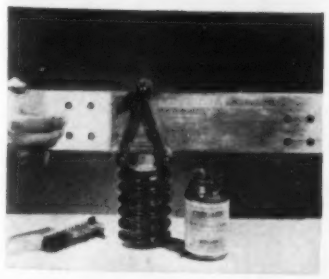
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY

For more details circle NED-923 C7 on enclosed inquiry slip

GENUINE — SIMPLE

SILVER PLATING

"ON THE JOB" WITH POWDER



Purposes of silver plating need not be explained to you of the electrical field.

The biggest problems of silver plating are its convenience, economy and thoroughness. "Cool-Amp" silver plating POWDER is the answer to these problems.

"Cool-Amp" deposits a genuine coat of silver that will not peel off and provides cool maximum conductivity for copper, brass or bronze contacts. It has been proven equal to any electroplating for bolted and stationary contacts and is far more adaptable . . . always ready to use.

"Cool-Amp" POWDER offers a quick and easy solution to heating due to oxidation, improves the continuity of electrical service and reduces maintenance.

"Cool-Amp" is completely harmless to the user and is simple to apply. It can be used by any number of people at the same time. ON THE JOB, in underground vaults and sub stations and in hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

Dampen a rag, dip in "Cool-Amp" and rub on surface. One pound will silver plate approximately 6,000 square inches.

$13.50 PER POUND SHIPPED PREPAID

WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

GENUINE • SIMPLE SILVER PLATING

The COOL-AMP Co.

Dept. ED. 8603 S.W. 17th Avenue, Portland 19, Oregon

For more details circle NED-924 C7 on enclosed inquiry slip

Wolverine

Heavy Duty

QUICK ACTION TOGGLE CLAMPS

Extra CLEARANCE
Extra SPEED

and now Extra SERVICE assured by the use of

HARDENED PINS & BUSHINGS

at all bearing points, in the popular C-100, CQ-1100, and CQ-800 series Toggle Clamps.

Rugged construction—drop forgings, cast steel and solid bar stock.

Wolverine Toggle Clamps also available in several types and sizes of Standard Action and Push Action units.

Write for Bulletin

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICHIGAN

For more details circle NED-925 C7 on enclosed inquiry slip

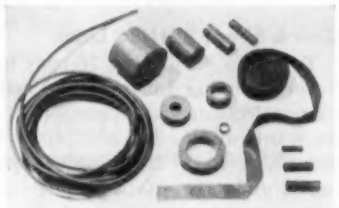
New Processes & Materials

CONTACT CEMENT is fire and explosionproof

Free from danger of explosion or combustibility, Elmer's nonflammable contact cement can be applied vertically or horizontally with brush or metal spreader. Companion solvent called Elmer's nonflammable cleaner and thinner is used. Uses include bonding of leather, plastic, linoleum, synthetic rubber and thin gage metal to plywood, pressed wood and other porous surfaces. Another application is nailless placement of plywood wall panels on flat surfaces, studs or furring strips. Made by **Borden Co.,** Chemical Div., Dept. NED-1, 350 Madison Ave., New York 17, N. Y.

For more details circle NED-927 C7 on enclosed inquiry slip

FLEXIBLE MAGNETIC PLASTIC tape and rod forms aid in circuit research work



Iron powder in rod and tape form comprises Ferrotron flexible ferromagnetic plastic offered for miniaturization of components and investigation of new or improved circuit concepts. Plastic has good magnetic and physical stability at up to 200° C and 100 per cent relative humidity. Magnetic permeability is constant over frequencies up to 3000 megacycles.

Sample kits provide rod diameters of ⅛, 3/32 and ¼-in., while tape, ½-in. wide, comes in thicknesses of 0.004, 0.008, 0.016 and 0.032-in. Ferrotron rod and tape also lend themselves to use as electromagnetic shielding of critical circuits, radio interference suppression, delay lines and as magnetic core material. Developed by **Polymer Corp. of Pennsylvania,** 2140 Fairmont Ave., Reading, Pa.

For more details circle NED-928 C7 on enclosed inquiry slip

HIGH TEMPERATURE ALLOY sheet material for 1400° F use

Highly stressed parts of jet engine combustion systems are among expected applications of Incoloy T, a titanium-content nickel-iron-chromium alloy. Produced as a sheet material and designed for temperatures up to 1400° F, the alloy has good oxidation resistance up to 1600° F. Use at even higher temperatures is possible in certain applications. Components annealed at 1800-1850° F have a good combination of formability and strength. For properties below 1200° F, tensile and rupture strengths can be improved by cold working. Developed by **International Nickel Co.,** 71 Wall St., New York 5, N. Y.

For more details circle NED-929 C7 on enclosed inquiry slip

For more details circle NED-930 C7 on enclosed inquiry slip

HYDROCIDE® *Pat. pending

COLORCOAT

A ONE-COAT, WATER-REPELLENT MASONRY FINISH

Just one coat of this resin-base masonry finish decorates, protects and makes most exterior walls water-repellent. The extra thickness of Colorcoat gives extra hiding power and extra weather resistance.

Colorcoat's decorative, textured finish increases the value of buildings old or new. Its toughness and long life cut maintenance costs. Colorcoat is applied by either brush or spray—to stucco, brick, concrete, block construction, and asbestos cement shingles.

- Contains Silicone to impart water-repellency
- Uniquely formulated* to eliminate chalking, flaking and peeling
- Bridges hairline cracks and pores
- Permits walls to "breathe"—reducing possible internal condensation
- Can be applied over surfaces previously painted with oil or water-base coatings
- Bonds two ways—by adhesion of its resin base, and gripping action of reinforcing agents
- Gives lasting protection, plus a colorful, textured finish
- Comes in 10 beautiful colors!

A Product of Sonneborn RESEARCH

Since 1903 manufacturers of quality building products.
Makers of LAPIDOLITH CONCRETE HARDENER
HYDROCIDE S•X COLORLESS • HYDROCIDE DAMPPROOFINGS

MAIL COUPON FOR MORE FACTS!

L. SONNEBORN SONS, INC.
Building Products Division—Dept. NE-3
404 Fourth Ave., New York 16, N. Y.

☐ I would like full information on how Colorcoat saves maintenance costs on old or new buildings.

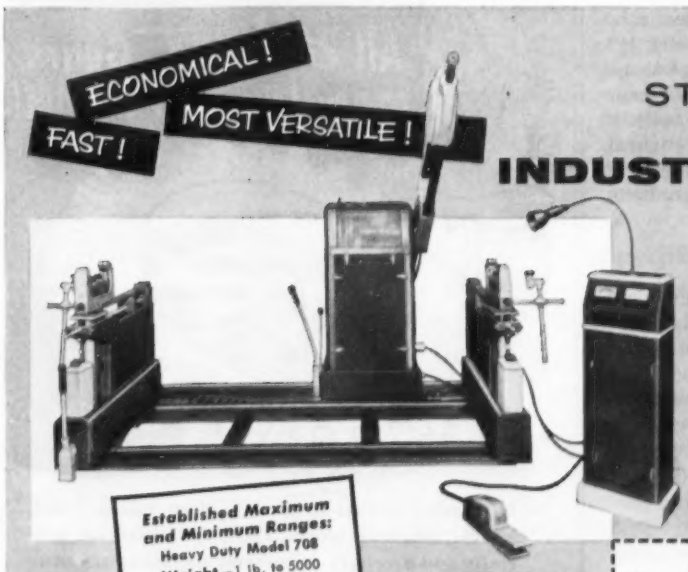
☐ I would like your Building Construction and Maintenance Handbook with 125 pages of important information.

Name..... Title.....
Company Name.....
Address.....
City..... Zone.... State.....

For more details circle NED-931 C7 on enclosed inquiry slip

ECONOMICAL! FAST! MOST VERSATILE!

THE NEW STEWART-WARNER "ELECTRONIC" INDUSTRIAL BALANCER



Wide Range Use—Handle single-piece, short-run and long-run production, as well as maintenance of your own machines.

Fast set-up! Adjusted to handle any job in less than two minutes.

No special tools required! New design permits change-over from one job to another without special fixtures.

Easy to operate! Semi-skilled workers can learn in one day.

Precision sensitivity! Balances both kinetically and dynamically with maximum sensitivity.

Lowest Cost! Cuts cost of balancing per piece so low that even smallest shops can now afford their own precision balancer.

Established Maximum and Minimum Ranges:
Heavy Duty Model 708
Weight—1 lb. to 5000
Diameter—1" to 68"
Length—7" to 83"
Sensitivity—0.04 inch-oz.
Portable and Standard Duty Models also available.

Write for FREE illustrated brochure on industrial balancing

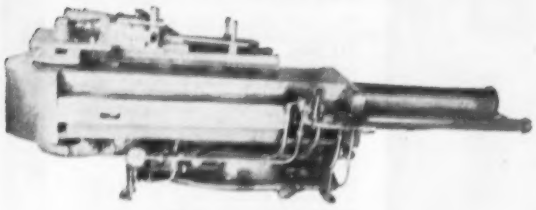
STEWART-WARNER CORPORATION
Dept. SS-37, 1850 Diversey Parkway, Chicago 14, Illinois
Please mail me all the facts about Stewart-Warner Industrial Balancers.

Name.....
Company.....
Address.....
City..... Zone..... State.....

STEWART SW WARNER STEWART-WARNER

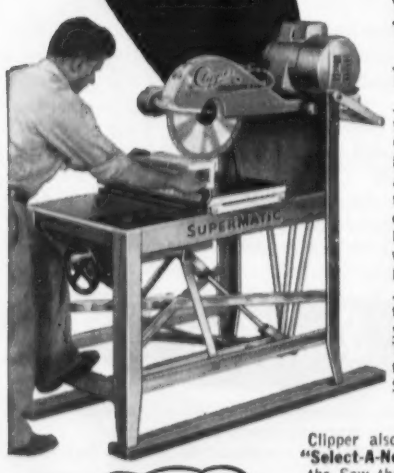
For more details circle NED-926 C7 on enclosed inquiry slip

Does Your Shop Bend?
These things?
Etc.
Wallace has been building quality benders since 1896.



Use our experience
Write for literature - but - tell us about your work.
Over 100 types -- wide range of sizes
Wallace Supplies Mfg. Co.
1306 Wolfram St. Chicago 13, Illinois
For more details circle NED-932 C7 on enclosed inquiry slip

CUT ANY REFRACTORY SHAPE
ARCH-SKEW-KEY-WEDGE WITH THE ALL-NEW-
Clipper "SAILS RIGHT THRU"
SUPERMATIC MASONRY SAW
with STA-LEVEL HEAD
and
HI-LO CONTROL WHEEL
The Best High-Production Saw Ever Built! HI-LO Control Wheel Automatically Keeps STA-LEVEL Cutting Head in Level Position . . Ready to Cut . . at any height, from 0" to 17" . . . NO ADJUSTMENTS TO MAKE! SUPERMATIC is SIMPLE-RUGGED -DEPENDABLE



YOU NAME IT THE SAW— THE JOB— THE MATERIAL--
. . . Clipper will name the Best Premium Quality Blade . . . Break - Resistant, Abrasive or Diamond, to give you the Fastest Cut . . . at the Lowest Cost . . . with the Greatest Ease . . . Anytime . . . Anywhere! Mail the coupon or call your Clipper Factory Trained Representative for Same Day Service!

Clipper also builds the famous "Select-A-Notch" Masonry Saw—the Saw that one man can adjust from his cutting position. priced from $335

ORDER YOUR CLIPPER MASONRY SAW ON FREE TRIAL!
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Genuine Clipper Products Sold Only Direct—Immediate Shipment From Factory Branches Coast To Coast

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ADDRESS
CITY, STATE
For more details circle NED-933 C7 on enclosed inquiry slip

New Literature & Catalogs

Airborne Equipment Switches

Minneapolis-Honeywell Regulator Co., Micro Switch Div.—"Basic Switches for Airborne Equipment" is title of 32-page catalog 78 covering the complete line of phenolic encased aircraft switches, as well as small, metal-covered hermetically sealed and high-temperature switches. Single-pole double-throw, double-pole double-throw, double-break, two-circuit and four-circuit contact arrangements as well as various actuators are shown.

For more details circle NED-934 C7 on enclosed inquiry slip

Sheet Metal Hand Tools

Niagara Machine & Tool Works—32-page pocket-size booklet 201 catalogs the Niagara line of manually operated machines and tools for light sheet metal work. Guide summarizes data on all important models. Machines for beading, crimping, edging, trimming, folding, punching, shearing, roll forming, slitting and hand grooving are described.

For more details circle NED-935 C7 on enclosed inquiry slip

Coil & Sheet Slitting Lines

Yoder Co.—Part I of 76-page handbook on "Multiple Rotary Slitting Lines" gives basic information on design, selection and operation of slitters and slitting lines, operating cycle analysis, coil handling and scrap disposal. Part II provides specifications, capacity tables and other data on slitters, uncoilers, recoilers, coil cars and scrap choppers.

For more details circle NED-936 C7 on enclosed inquiry slip

Machinists' Vises

Reed Mfg. Co.—Machinists', special purpose and utility vises are among the eight basic vise models described and illustrated in 6-page folder MV1156. Made in stationary and swivel bases, vises come in jaw widths of 3 to 8 in. with openings from 4 to 12 in. Replacement parts are listed.

For more details circle NED-937 C7 on enclosed inquiry slip

Copper-Clad Laminates

Taylor Fibre Co. — Fabricating information and physical and electrical properties of copper-clad laminated plastics for printed circuit applications are related in 4-page illustrated bulletin. Two grades which feature high temperature resistance, good machinability and other advantages are covered.

For more details circle NED-938 C7 on enclosed inquiry slip

Buying Used Machine Tools

S & S Machinery Co.—Offered as a primer for the used machinery buyer, illustrated booklet "How to Buy a Used Machine Tool" is written in question and answer form. It explains what test equipment should be used; things to look for when inspecting a used machine; and the pros and cons of buying "as-is," reconditioned or rebuilt.

For more details circle NED-939 C7 on enclosed inquiry slip

Silicone Rubber Compounds

Acushnet Process Co.—New silicone rubber compounds that offer unusual heat resistance and low shrinkage have just been released for industrial usage. Details of precision molding service in these compounds is presented in 12-page illustrated bulletin. Design aid and application guidance are provided. Also described is Dow-Corning DC-301 silicone resin molding compound for electrical insulating products.

For more details circle NED-940 C7 on enclosed inquiry slip

Air-Operated Tools & Equipment

Thor Power Tool Co.—Pneumatic drills, grinders, hammers, impact wrenches, screwdrivers and nutsetters as well as air-operated hoists are some of the Thor industrial air tools described in 84-page illustrated catalog No. 53. Over 40 basic tools, with thousands of model variations, accessories and adapters, are detailed. Brief descriptions are included on contractors air tools, high frequency and universal electric tools, and related products.

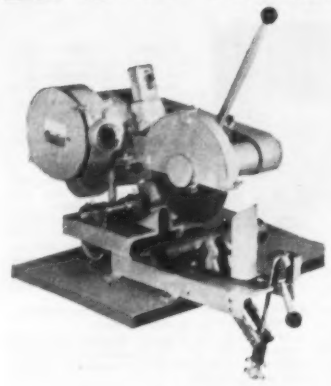
For more details circle NED-941 C7 on enclosed inquiry slip

Welded Steel Tubing

Armco Steel Corp. — 20-page illustrated manual "Armco Welded Steel Tubing" describes tubing formed from Zincgrip zinc-coated, Aluminized aluminum-coated, hot rolled and cold rolled steel. Sizes range from ¼ to 3-in. OD in 11 to 24-gage. Also available is wide range of standard and special shapes of welded tubing, drawn to specific requirements. Fabrication and mechanical properties are discussed.

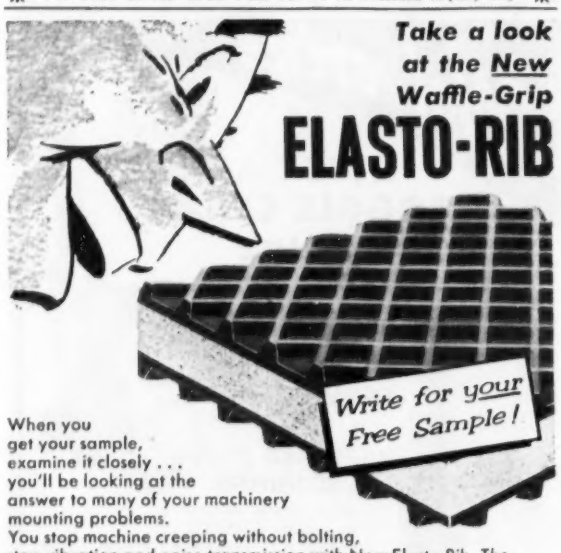
For more details circle NED-942 C7 on enclosed inquiry slip

Does Your Shop Cut?
These things?
Etc.



This machine can Cut and Deburr only Wallace makes one
44 page catalog - Free - Write for it!
It describes
Wallace Cut-Machining Units
8 types - wide capacity range
Wallace Supplies Mfg. Co.
1306 Wolfram St. Chicago 13, Ill.
For more details circle NED-943 C7 on enclosed inquiry slip

Take a look at the New Waffle-Grip
ELASTO-RIB



When you get your sample, examine it closely . . . you'll be looking at the answer to many of your machinery mounting problems.
You stop machine creeping without bolting, stop vibration and noise transmission with New Elasto-Rib. The all directional waffle-grip neoprene and resilient cork combine to form a non-slip cushion.
New Elasto-Rib is available in sheets; or with a load-distributing steel plate; or made up into Leveling Dampers. We'll include complete data with your sample. Write today, mentioning Bulletin 42.
THE KORFUND COMPANY, INC.
VIBRATION CONTROL SPRINGS RUBBER CORK
48-35P Thirty Second Place, Long Island City 1, N. Y.
In Canada: 510 Canal Bank, Ville St. Pierre, Montreal
For more details circle NED-944 C7 on enclosed inquiry slip

No stocks! All Abart Gears—spur, spiral, bevel, helical, internal, worm, rack, sprocket—are specially and precisely cut to your specifications. Any material—any quantity—96 pitch to 5/7 D.P.—¼" P.D. to 18" P.D. Send B/P and specs or sample for estimate. Request ABART Gear Bulletin.

ABART GEAR and MACHINE CO.
4826 WEST 16th STREET CHICAGO 50, ILLINOIS
For more details circle NED-945 C7 on enclosed inquiry slip

✳ Longer Tap, Tool and Die Life

✳ Faster Tapping and Metal Cutting

Write today FOR BROCHURE 537A

Pioneer and Leader in Oil-Fog Lubrication Since 1930

C. A. NORGREN CO.

3405 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

For more details circle NED-946 C7 on enclosed inquiry slip

FORD H.S.S. UNIFLUTE COUNTERSINKS

.... free working smooth cutting for

You'll need fewer tools for these jobs because the FORD H.S.S. Uniflute Countersink is designed to handle all three of these operations — in any hole size from the end diameter to the major diameter. The simple single flute design with cam relief does it. Eliminates chatter and secondary burrs. Low in cost, too — and easily resharpened in your own shop. We tell you how. Also available in Carbide.

WRITE FOR NEW FORD BULLETIN NO. 702

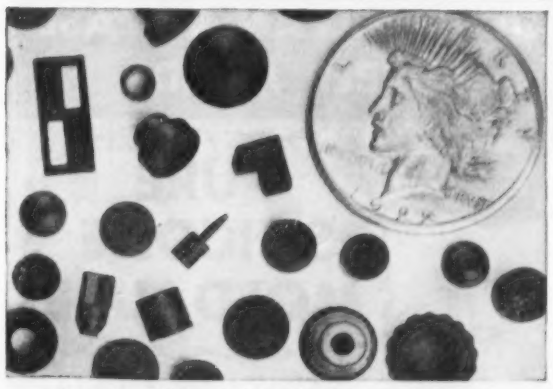
Rotary FORD Tools

M. A. FORD MFG. CO. INC.

721 W. River St., Davenport, Iowa

Precision Manufacturer of H.S.S. and Carbide Rotary Cutters • Carbide End Mills • Special Tools

For more details circle NED-947 C7 on enclosed inquiry slip



Examples of Minn. Rubber sub-miniature rubber parts.

free samples free samples

Rubber parts for you to test . . . samples of Minnesota Rubber's custom molding, silicone fabrication, rubber bonded to metal, seals or sub-miniature parts will be sent you without obligation. Technical data will be included. Simply specify the type of product or part you are interested in.

To show you the superiority of injection molding . . . these samples will point up the advantages of Minnesota Rubber's exclusive *injection molding* process. This development of MR offers mass production at low cost with tolerances possible within .002". Tougher structure, longer flexing life are additional advantages of injection molding that can mean greater economy and high, consistent quality. *Write today* for your FREE samples and technical data. Please specify type of product or part from listing above.

minnesota rubber & gasket co.

Originators of Modern Rubber Injection Molding

3630 Wooddale Avenue, Minneapolis 16, Minn., Dept. 610

For more details circle NED-948 C7 on enclosed inquiry slip

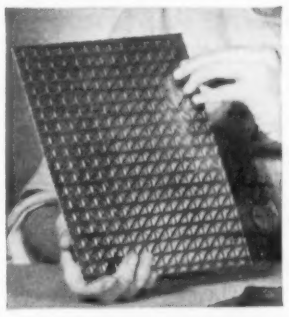
New Processes & Materials

PHOTOCOPY MATRIX PAPER economically makes single copies

Single photocopies can be produced economically using Verifax CS matrix paper as a supplement to regular multiple copy Verifax matrix paper. Cost for one copy is reduced to less than 8 cents in preparation of Verifax copy replies, translucent masters for diazo type print production and Verifax offset masters for use with office duplicators. Copies have a permanent quality and can be made on one or two sides of regular copy paper, card stock or preprinted forms. All colors and types of ink originals, and spirit copies can be photocopied in room light with the CS paper, available in letter and legal sizes. Made by **Eastman Kodak Co.**, Dept. E, 343 State St., Rochester 4, N. Y.

For more details circle NED-949 C7 on enclosed inquiry slip

MYLAR-COVERED SHEET METAL can be drawn, stamped or shaped



Variety of rigid and flexible materials, including sheet steel and aluminum, are available with a film of plain or embossed Mylar bonded to one side. Film is bonded with a thermosetting adhesive under heat and pressure applied on giant flat-bed presses. Once bond cures and sets, it will not soften with reheating. Metal covered with Mylar can be drawn, stamped or otherwise shaped; nailed or spot welded from the metal side; or drilled or sawed without damaging the surface. Wallboard, pressed wood, flexible and rigid plastics and paper are among other materials to which Mylar can be bonded. Made by **Seiberling Rubber Co.**, Plastics Div., Akron 9, O.

For more details circle NED-950 C7 on enclosed inquiry slip

PHOTOCONDUCTIVE POWDER and electroluminescent phosphors

Four developmental electroluminescent phosphors and a photoconductive powder are available to industry in limited quantities. Phosphors emit visible or near-visible radiation when subjected to electric fields. Spectral characteristics are peaked in red, yellow, green and blue regions. Photoconductive materials have electrical resistivities which change significantly when exposed to suitable radiation. Used separately or in combinations, these materials have a variety of potential applications, including light amplifiers, transducers for direct conversion of nonvisible to visible radiation and other opto-electronic devices such as data storage units, delay lines and switches. Made by **Radio Corp. of America**, RCA Tube Div., 33rd Floor, 744 Broad St., Newark 2, N. J.

For more details circle NED-951 C7 on enclosed inquiry slip

SHAPED & FLAT WIRE heat and corrosion resisting alloys

Combination drawing and rolling process is used to produce shaped and flat wire and rod of Monel, Inconel, Inconel X, nickel and Techalloy stainless steels and other special heat and corrosion resisting alloys. Wide variety of shapes can be specified. Maximum dimension cannot be over ½-in., but can range down to 0.002-in. Features are low cost, no tool marks, smooth surfaces, strength and toughness. Coils, spools or straight lengths are offered. Made by **Techalloy Co.**, Dept. SL, Rahns 1, Pa.

For more details circle NED-952 C7 on enclosed inquiry slip

IS YOUR INDUSTRY KEEPING UP WITH THE FAST-MOVING HEAT-CONTROL FIELD?

DO YOU KNOW ABOUT FENWAL'S MINIATURE AND MIDGET THERMOSWITCH® TEMPERATURE CONTROLS?

DO YOU KNOW THAT THE UNIQUE THERMOSWITCH PRINCIPLE MAKES FOR THE MOST RUGGED, RELIABLE THERMOSTATS?

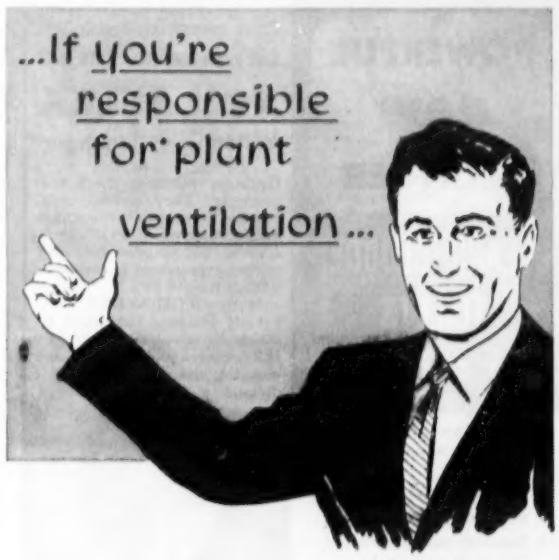
DO YOU KNOW THAT FENWAL NOW MAKES EXTRAORDINARILY SMALL ONES FOR TIGHT SPOTS?

Designers — write to Fenwal Incorporated, 83 Pleasant Street, Ashland, Mass.

Fenwal Controls Temperature ... Precisely

For more details circle NED-953 C7 on enclosed inquiry slip

...If you're responsible for plant ventilation...



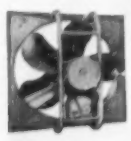
. . . you have a big job! Problems of fume, steam and smoke removal land in your lap. Some areas are too hot for peak work efficiency — fresh air has to be moved into every part of the plant — perhaps humidity control is important or paint booths have to be ventilated . . . You may have 1000 problems, but . . .

Chelsea

---has 1000 ways to help you!

. . . by that we aren't simply boasting about the fact that we have over 1000 regularly stocked models and sizes of Chelsea fans! For over 30 years we've been fan specialists and we can effectively assist in the design of a complete plant ventilating system or a single spot cooling device. Furthermore, we're not limited in our recommendations because we make practically every type and size of fans that you could possibly use!

USE CHELSEA'S ENGINEERING EXPERIENCE!



With the records of thousands of successful installations to draw from and the 'know-how' that comes only with experience, Chelsea engineers can provide practical solutions to any ventilating problem . . . We'll gladly make a survey and submit our recommendations without cost or obligation — just call or write us!

TYPE IND Ventilating Fans

PH & PHD Pent House Units

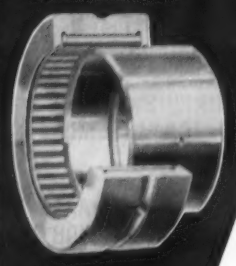
CHELSEA FAN & BLOWER CO., INC.

PLAINFIELD, NEW JERSEY

59-29

For more details circle NED-954 C7 on enclosed inquiry slip

McGILL MULTIROL®
PRECISION NEEDLE BEARINGS
for supporting heavier loads when space is limited



Multirol SE bearings easily replace plain bearings for increased capacity, precision performance and longer life. Simplified lubrication, reduces maintenance cost. Construction features a full complement of rollers with retaining end shoulders built integral with the outer ring, eliminating loose or welded-in end-washers. MULTIROL SE bearings occupy little radial space for their load carrying capacity . . . and save even more space when outer ring and roller assembly operate directly on a hardened and ground shaft.

Write for helpful bearing Handbook No. H-54-B

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McGILL MANUFACTURING CO., INC.
101 N. LAFAYETTE STREET VALPARAISO, INDIANA
For more details circle NED-957 C7 on enclosed inquiry slip

POWERFUL new PLUNGER
CLEARS CLOGGED TOILETS in a jiffy!

Clear messy, stuffed toilets
Cut maintenance costs with
'TOILAFLEX'
Toilet ALL-ANGLE Plunger

Ordinary plungers don't seat properly. They permit compressed air and water to splash back. Thus you not only have a mess, but you lose the very pressure you need to clear the obstruction.
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- Accordion-action design to flex at any angle
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- Tapered suction-grooved tail gives air-tight fit

$2.65 Fully Guaranteed

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A Division of The Water Master Company
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HI-LO speed couplers

HI VOLUME of air . . . passes all the air you need . . . leakproof . . . positive lock . . . easy disconnect.

LO PRESSURE drop . . . most efficient coupler by actual test! Cuts operating costs for all air-powered devices.

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SPEED COUPLERS
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For more details circle NED-959 C7 on enclosed inquiry slip

New Literature & Catalogs

Protective Coatings

Rust-Oleum Corp. — Easy-to-understand 32-page manual contains information and recommendations which enable user to determine the specific coatings needed to protect practically any rustable metal surface. Ideas for protecting girders, tanks, piping, stacks, boilers, fences, roofs, etc. are given. Floor coatings are also included. Color chips show colors offered.

For more details circle NED-960 C7 on enclosed inquiry slip

Movable Metal Walls

Mills Co.—Flush pilaster, New Executive and Commercial types of movable metal walls, plus a new series of Milluminum walls based on a modular integration of movable interiors, are described in detail in illustrated 1957 Mills walls catalog. Many illustrations show varied applications. Also covered are construction features, accessories and hardware.

For more details circle NED-961 C7 on enclosed inquiry slip

Fluid Power Equipment

New York Air Brake Co., Kalamazoo Div.—Condensed 8-page illustrated bulletin 400 contains data on Hydreco gear and Dual-Vane hydraulic pumps, control valves and cylinders. Condensed performance information is included.

For more details circle NED-962 C7 on enclosed inquiry slip

Hydraulic & Power Equipment

Groban Supply Co.—Details of equipment for application of hydraulic power in all types of machines are contained in 60-page 1957 illustrated catalog. Included is section on surplus equipment for factory and machine shop use. Described are new and surplus generators, hydraulic motors, pumps, valves, transformers, cylinders and controls.

For more details circle NED-963 C7 on enclosed inquiry slip

Plastic Injection Molding Equipment

Guy P. Harvey & Son Corp.—Four illustrated 4-page bulletins cover Autoform molds for complex injection molded plastic parts and describe 2-oz, 3-oz and combination Formation automated injection molding machines. Full specifications are given.

For more details circle NED-964 C7 on enclosed inquiry slip

Steel Tube Fittings

Weatherhead Co.—Engineering data on 7000 and 8000 series of Ermeto flareless hydraulic fittings and Flare-Twin flare JIC fittings are presented in 48-page guidebook "Steel Tube Fittings." Section is devoted to assembly instructions, materials, finishes and operating pressures.

For more details circle NED-965 C7 on enclosed inquiry slip

Resistance Weld Tube Mills

Yoder Co.—64-page illustrated handbook "Electric Resistance Weld Tube Mills" covers step-by-step the entire weld tube making process. Phases described include roll forming and shaping of tube through to the finished product. Specifications are given on various sizes of electric weld tube mills. Photographs, charts and drawings explain operation and capacities.

For more details circle NED-966 C7 on enclosed inquiry slip

How to Operate a Lift Truck

Hyster Co.—24-page illustrated manual "How to Operate a Lift Truck" uses diagrams, cartoons, pictures and text to explain proper operation, preventive maintenance, safety and basic material handling techniques with lift trucks. Prepared for use as part of an operator training program, it is also useful as a guide for the experienced operator.

For more details circle NED-967 C7 on enclosed inquiry slip

Cast Vinyl Film & Its Use

Bakelite Co.—The brilliant clarity and toughness of vinyl film made by the casting method, and its uses and properties are demonstrated and described in 20-page illustrated bulletin "Krene—Cast Vinyl Film." Uses shown range from display packages to protective covers and storm windows. Film is available in continuous roll form, in widths up to 48 in.

For more details circle NED-968 C7 on enclosed inquiry slip

Saw Blades for Metal Cutting

Hether Bros. Saw Mfg. Co.—Saw blades for practically every metal cutting operation are shown and described in 16-page illustrated catalog No. MS 500. Types detailed include segmental, high speed steel, Stellite and carbide tipped and slitting circular blades; band saws and special cutters.

For more details circle NED-969 C7 on enclosed inquiry slip

Wheeler "PACKAGE PLAN" LIGHTING
the efficient time saving way to solve all your lighting requirements at one time!

Wheeler
REFLECTOR COMPANY
Div. of FRANKLIN RESEARCH CORP.
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Distributed Exclusively through Electrical Wholesalers
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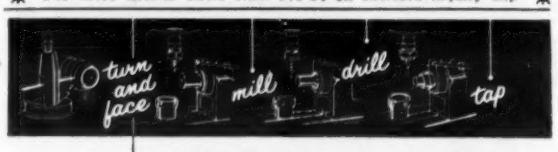
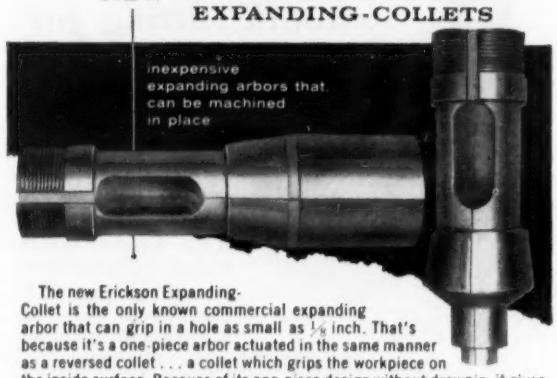


NEW ERICKSON EXPANDING-COLLETS



The new Erickson Expanding-Collet is the only known commercial expanding arbor that can grip in a hole as small as 1/8 inch. That's because it's a one-piece arbor actuated in the same manner as a reversed collet . . . a collet which grips the workpiece on the inside surface. Because of its one-piece design without drawpin, it gives maximum wall thickness and full gripping power equal to that of a collet.

That means you can convert your machine to internal chucking by merely inserting the new Erickson Expanding-Collet. And since it is machined in place on the machine, it gives greatest possible accuracy . . . can be re-machined for new jobs . . . solves the rush-order problem.

Order a stock of new Erickson Expanding-Collets. They'll save your time, your temper and your money. AA-4905

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Collet Chucks • Floating Holders • Tap Chucks • Indexers • Tap Holders Air-Operated Chucks • Expanding Mandrels • Special Holding Fixtures
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PURE SILICONE MOLD LUBE

Clean • Concentrated!
The economical way to apply costly silicone to all quality rubber molds. Quick, tool Save cycle time with handy pressurized dispenser.

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SHOWS CO Hazard INSTANTLY

- Shows CO hazard directly — at a glance
- Requires no color matching or reference to comparator scales
- Test takes only a few seconds
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- No special training needed

The MONOXOR detects presence of CO, even in concentrations as low as 100 parts CO per million parts of air. Particularly useful for a spot-check of carbon monoxide contamination in garages, vehicular tunnels, mines, industrial plants and wherever gas appliances are operated.

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Space was saved and automatic finishing achieved by combining two overhead handling systems.

American MonoRail cars carrying metal panels move through degreasing, priming, finishing and baking. In each operation either loading or unloading is performed automatically by power—the Landahl Chainless Conveyor acting as a "pusher" over most of the system. To cut your handling costs, write today.

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KESTER FLUX-CORE SOLDER has long been first choice with an overwhelming percentage of the nation's Purchasing Agents. Most P.A.'s are well aware of Kester Solder's quality ingredients and manufacture; it makes their job easier!

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SULPHURIZED CUTTING OIL packaged in pressurized spray can

Reinforced heavy bodied DCS cutting oil emulsion is formulated from chlorinated base sulphurized oils that do not run off the work. Pressurized spray can permits application to the spot where needed, such as for inside threading of pipe. It will cling to such soft metals as aluminum and brass or hard stainless steels during drilling, cutting, sawing, threading or tapping at any angle. Made by **A. W. Chesterton Co.**, 8 Ashland St., Everett 49, Mass.

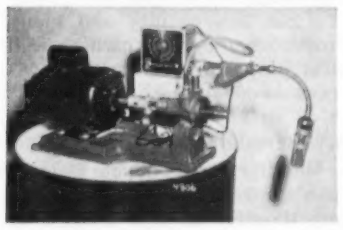
For more details circle NED-976 C7 on enclosed inquiry slip

NYLON BONDING AGENT bonds to itself and other materials

Epoxy base bonding agent R-323 will bond nylon to itself, to metal, or to other materials. It possesses a high bond and peel strength and is suitable for use with rubber. Made by **Carl H. Biggs Co.**, Dept. 123, 2255 Barry Ave., West Los Angeles, Calif.

For more details circle NED-977 C7 on enclosed inquiry slip

CEMENT ADDITIVE increases strength and workability



Increased strength, smooth finish and better workability result from use of Placewel cement additive in conventional ready mix cement. Photo shows motor-driven dispenser used for adding the product to the cement in the correct proportions. Made by **Johns-Manville Corp.**, Celite Div., Box 60, New York 16, N. Y.

For more details circle NED-978 C7 on enclosed inquiry slip

CHROME-FINISHED PLASTIC SHEET has pressure-sensitive adhesive

Stock sheets of unsupported Mirro-Brite Mylar plastic with a 1-mil high luster chrome finish are now available for the label, decal, point-of-purchase, silk screen, display and decorative fields. Material is backed with pressure-sensitive adhesive for nonmoistening applications. Sheet sizes are 20 x 25 in., although special sizes can be ordered. Nontarnishing qualities of material allow its use outdoors for signs, bumper strips and other uses requiring metallic effect. Made by **Coating Products**, 101 A Forest Ave., Englewood, N. J.

For more details circle NED-979 C7 on enclosed inquiry slip

NAMEPLATES—INSTRUCTIONS—DIAGRAMS—WARNINGS—DECORATIONS

MARK IT PERMANENTLY—ATTRACTIVELY—WITH *Color*

AMERICAN DECAL PRODUCT MARKINGS

Applied with Production Line Speed

To assure more effective dependable product marking, American decals are laboratory formulated and tested to your specific requirements! The component materials of your product, the type of surface on which the decals are applied and the conditions to which the decal is subjected are all considered. Twenty-one "standard" American decal markings are available—or a special type may be formulated to better meet your needs.

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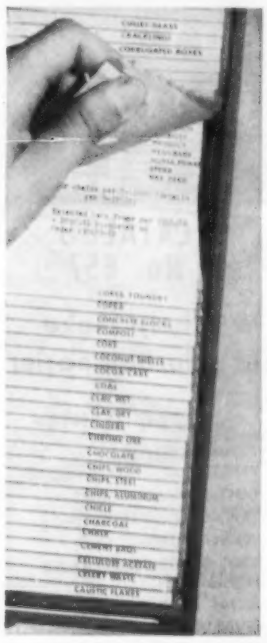

"what type of Crusher, Grinder, Pulverizer, or Shredder do we need?"

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Make exact-copy whiteprints as fast as you need them—save time, work and money. With the modern P&H SPEEDMASTER, anyone can economically print and develop exact, same-size black-line and colored-line whiteprints of charts, reports, letters, drawings, or any translucent original whether written, typed, printed or photographed. SPEEDMASTER handles cut sheets or roll stock up to 44" wide in any length. Electronic drive provides instant speed changes with full stop and reverse control. Ruggedly built of jig-drilled aluminum castings.

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Progressing with the Reproduction Industry Since 1937
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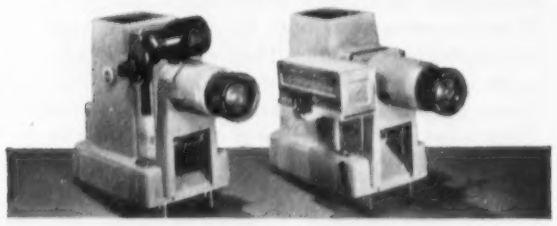
For more details circle NED-982 C7 on enclosed inquiry slip

KODASLIDE SIGNET PROJECTORS have precision movements, handy controls, extra brightness, to help you show your slides and filmstrips with full effectiveness.



Slides and filmstrips work their *hardest* with these easy-to-use, versatile projectors

Make your slides and filmstrips work to full effect—show them with a Kodaslide Signet Projector.

Frames advance smoothly, and fast as a flick—even with cut or damaged film—thanks to the new, enclosed, nylon-geared Geneva mechanism. Sprocket teeth are visible for fast threading. Rapid rewind device.

Convenient controls let you concentrate comfortably on your *presentation*—not your projector. Special lenses and reflectors help deliver brilliant, sparkling pictures. Impeller-type blowers, aluminum panels, thick heat-absorbing glass assure cool, quiet performance. And you can convert from filmstrips to slides—and back—in seconds!

Signets are available in either 300- or 500-watt models, with lightweight carrying cases, if you wish.

Get full details—write for free pamphlet

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

Kodak

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For more details circle NED-984 C7 on enclosed inquiry slip

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Alcoa® Aluminum Fasteners guard your reputation for quality aluminum awnings. They insure against both galvanic and atmospheric corrosion. They provide perfect color match and lasting good looks. Specify Alcoa Fasteners for assembly and installation. Your local Alcoa distributor carries complete stocks for every requirement. He is listed in the Yellow Pages of your telephone directory.

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For more details circle NED-985 C7 on enclosed inquiry slip

New Literature & Catalogs

Air-Motor Grinders & Drills

Airetool Mfg. Co.—Performance data and application information are given on line of portable air-motor grinders and drills. Grinders are described for 6 and 8-in. wheels and 6-in. cup wheels. Also shown is abrasive belt attachment for portable pneumatic grinders. Two drills have capacities of 1/16 to ¾-in. and up to ¼-in.

For more details circle NED-986 C7 on enclosed inquiry slip

Precision Cam Generator

Steuby Mfg. Co.—Screw machine cams can be made accurately and rapidly with the Gen-A-Cam precision cam generator. This attachment for grinding or milling machines is easy to set up and use. Full details are given in 4-page illustrated bulletin.

For more details circle NED-987 C7 on enclosed inquiry slip

Steel & Alloy Castings

Dodge Steel Co.—"Dodge Steel Castings" is title of revised guidebook to 12 metals for casting. Chemical, physical and general properties are given on carbon, manganese-chromium-molybdenum, carbon-molybdenum, chromium-molybdenum and nickel steels.

For more details circle NED-988 C7 on enclosed inquiry slip

Synthetic Rubbers

E. I. du Pont de Nemours & Co.—"The Du Pont Elastomers" is title of 16-page illustrated manual on neoprene and Hypalon. These synthetic rubbers offer oil, abrasion, sunlight and flame resistance; low temperature flexibility; gas permeability and many other advantageous properties. Typical uses as well as physical and chemical properties are given.

For more details circle NED-989 C7 on enclosed inquiry slip

Permanent Magnets, Thermistors & Varistors

General Electric Co., Metallurgical Products Dept.—"Trends and Developments for Electrical Design Engineers" is title of comprehensive 12-page booklet on permanent magnets, Thermistors and Thyrite varistors. How and where these devices can be used in electrical and electronic equipment is explained. Technical data offer guidance to performance.

For more details circle NED-990 C7 on enclosed inquiry slip

Vinyl-Backed Strapping Tape

Johns-Manville Corp., Dutch Brand Div.—Uses and advantages of a 250-lb tensile strength pressure-sensitive strapping tape with vinyl backing are described in 8-page booklet 74-52. Uses covered are packaging, package reinforcing, bundling, palleting, unitizing and tear stripping.

For more details circle NED-991 C7 on enclosed inquiry slip

Electric Power Equipment

Electric Machinery Mfg. Co.—36 illustrated pages of bulletin 200-PRD-215 present condensed information on large induction motors, synchronous motors, motor generator sets, high frequency generator sets, adjustable speed magnetic drives, motor controls, ac generators (engine, turbine and water wheel driven types) and generator switchgear.

For more details circle NED-992 C7 on enclosed inquiry slip

Jig & Fixture Components

Northwestern Tool & Engineering Co. — Four hundred components for jigs and fixtures are listed on 2-page illustrated catalog sheet No. 26. Included are three new types of toggle shoe clamps, plus studs, flat and spherical washers and plain and flanged nuts.

For more details circle NED-993 C7 on enclosed inquiry slip

Welding Electrodes

National Cylinder Gas Co.—Illustrated Electrode Data Book NH-504 of 24 pages presents information on AWS-ASTM arc welding electrode specifications, how to estimate electrode consumption, welding symbols, factors in selecting electrodes and other technical data.

For more details circle NED-994 C7 on enclosed inquiry slip

Belt Conveyor Idlers

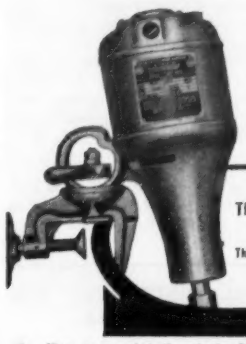
Chain Belt Co.—Belt conveyor idlers are divided into four major service requirement classifications in 60-page illustrated bulletin 56-80 to facilitate their selection for specific jobs. Included are selection charts, and examples of uses. Type of material handled, operating conditions and life expectancy are among factors considered. Technical data for all models are presented in detail.

For more details circle NED-995 C7 on enclosed inquiry slip

ONE MIXER DOES IT

AT LOW COST - FOR MANY DIFFERENT MIXING JOBS!

The PATTERSON TYPHOON PORTABLE POWER MIXER



If you have a batch mixing problem, solve it with TYPHOON Portable Mixers! A single unit serves several tanks or kettles—easy to carry from point to point, light, powerful, sturdy, long-lived. Direct or geared drive models from ¼ to ¾ HP. Write!

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The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada
MONTREAL

For more details circle NED-996 C7 on enclosed inquiry slip

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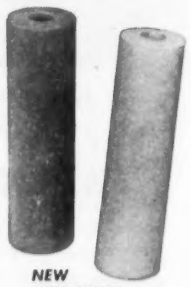
EDGE-TYPE • WIRE-WOUND • SCREEN
FIBER CARTRIDGE • POROUS METAL

The Finest in Fiber Cartridge Filters

MICRO-KLEAN



Exclusive "Graded Density" feature makes the *whole* cartridge body available for micronic filtration . . . DOUBLES cartridge life, cuts replacement costs IN HALF! *Two* Micro-Klean types now available: Wool Cartridge for general industrial applications . . . White Cartridge for sparkling, crystal-clear water and liquid food processing. A complete line of standard housings for liquids and compressed air.

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There is a Cuno Field Engineer conveniently located in your area. This specialist offers you more years of experience in removing more sizes of solids from more kinds of fluids.

NEW LITERATURE WRITE TODAY . . *for your free copies of Catalog No. 051 (Wool Ctg.) and No. 53-100 (White Ctg.)*

CUNO Engineering Corporation
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For more details circle NED-997 C7 on enclosed inquiry slip

Can't read it?

next time, say STANLEY!

It's not your eyes, it's those invisible markings. If you can't see 'em, you can't read 'em! Next time get a rule with markings you *can* read. Ask for a rule that lasts longer. Be precise . . . say Stanley, it's a *good* rule.

Take this Stanley 6 ft. No. 106 for example. No comparable rule reads easier longer. It never shows early symptoms of "outside stick fadeout." The numbers are bold, black Gothic. The graduations are sharp, clear indentations. And all markings are protected with a long-wearing plastic finish. The joints are smooth working, too, and they stay that way. They have been *permanently lubricated*. Don't get your eyes checked, get a new rule, and this time say Stanley when you buy.

STANLEY TOOLS, DIVISION OF THE STANLEY WORKS,
NEW BRITAIN, CONNECTICUT

STANLEY

THE TOOL BOX OF THE WORLD

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FOR POSITIVE, LOW-COST SPROCKET DRIVES . . . TRY GENUINE BEAD CHAIN

Now successfully employed in radio and TV tuners, recorders, air conditioners, timing devices, etc. Designed for economical, positive gear trains or drives free of slippage and backlash.

VERSATILE BEAD CHAIN has many other advantageous applications such as:
- part retainers
- remote control devices
- fan or ventilator pulls
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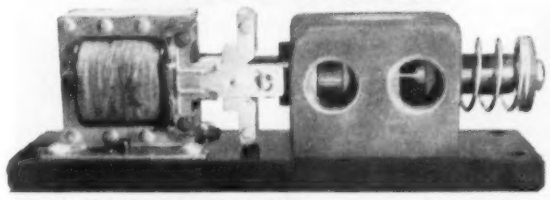
THE BEAD CHAIN MFG. CO.
16 Mountain Grove St., Bridgeport, Conn.

For more details circle NED-999 C7 on enclosed inquiry slip

Bachman Air and Hydraulic Control Valves



½" SPS, 3-Way, 3 Port $16.50
110 V—for pressures to 200 p.s.i.*

The illustrated valve is widely used for control of single-acting air devices such as hoists, gates, clamps and other pressure devices where piped exhaust is required. This valve is 8" long, weighs 2 pounds and mounts in any position.

If you use a double-acting cylinder for delicate hoisting operations, valve Model S-633 can be connected to the blind end, with line pressure piped direct to rod end of hoist. Load is gently lifted when valve is closed and descends, under controlled pressure, when valve is opened.

Bachman continuous duty, direct acting solenoid valves, with O-ring seals, cost less than most hand operated valves. Made of tough, canvas-base phenolics, you'll never have to baby these valves because the resilient construction quietly absorbs punishment, assuring millions of cycles of trouble-free service.

*Model S-633 in ¼" size $12.75

Write for our Bulletin M-7 and name of local distributor, or order direct with our guarantee of satisfaction.

JOHN D. BACHMAN & COMPANY
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For more details circle NED-1000 C7 on enclosed inquiry slip

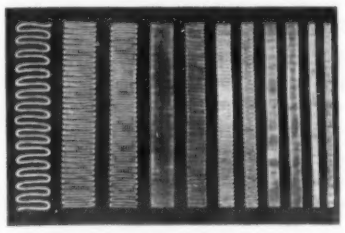
New Processes & Materials

SOLDERING FLUX
wetting action increases spreading

Wetting action of Wetoil nonacid soldering flux makes possible its penetration of dirt, oil and grease to provide a uniform tinning action and subsequent good bond. Suited for copper, brass, steel and terneplate soldering, the improved water soluble product contains alkaline buffers which increase flux stability and reduce its residual attack. It is a fast scavenger at low heat, will withstand a wide temperature range without oxidizing and can be used with torch or soldering iron. Made by **Farrelloy Co.**, 1246 N. 26th St., Philadelphia 21, Pa.

For more details circle NED-1002 C7 on enclosed inquiry slip

HEATING ELEMENT WIRE
in ⅛ to 3-in. sinuated widths



Maximum radiation surface exposure is provided by this flat sinuated heating element wire, adaptable to thin wall, pliant construction requirements. Wire is preformed to specification in width, length, turns per inch, and type and gage of wire. The flat sinuated width can be made from ⅛ to 3 in. as determined by wire gage. Wire is available wound on spools or in cut lengths from **Syntron Co.**, 405 Lexington Ave., Homer City, Pa.

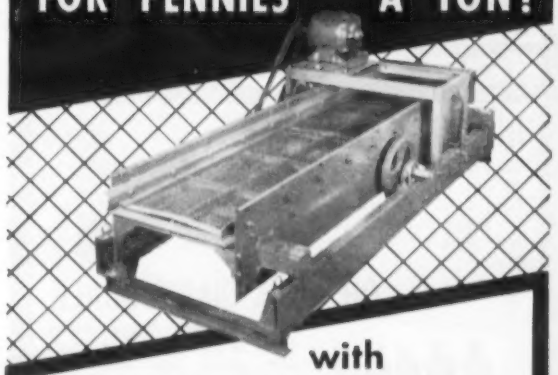
For more details circle NED-1003 C7 on enclosed inquiry slip

MOISTURE ABSORBENT
absorbs up to 10 times its weight

By removing dampness from room, Hum-I-Dri moisture absorbent prevents rust, corrosion and mildew when used in various types of buildings. It reportedly absorbs up to 10 times its own weight in moisture from the air. Unit consists of a 5 or 10-lb bag of activated chemicals suspended on a wire frame above a drainage drip pail. Chemicals remain active until they disappear. Replacement bags are available. Made by **Speco, Inc.**, Dept. RSA, 7308 Associate Ave., Cleveland 9, O.

For more details circle NED-1004 C7 on enclosed inquiry slip

LOW VOLUME SCREENING FOR PENNIES A TON!



with MIGHTY-MITE VIBRATING SCREENS

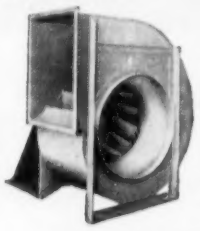
Here's a proven fast, effective, low cost way to screen, separate or reclaim lightweight materials. Get the facts on Mighty-Mite now! Write

SCREEN EQUIPMENT CO., INC.
Buffalo 25, New York

For more details circle NED-1005 C7 on enclosed inquiry slip

GENERAL FOR Easy AIR MOVEMENT

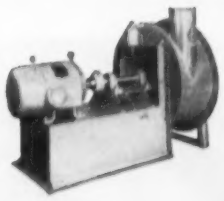
There's a General Blower unit, tailor-made for any industrial application. Before you buy any blower, it will pay to get the specs on General. Tested in accordance with NAFM standards.



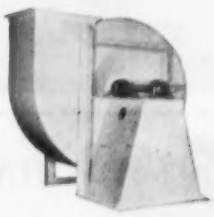
*BACKWARD BLADE NON-OVERLOADING CENTRIFUGAL FAN
Write for Bulletin BB 102
Non-overloading, quiet, highly efficient over wide range of applications. Built to handle high pressure requirements in high velocity air conditioning systems, as well as normal ventilating needs and industrial processes.

FUME EXHAUSTERS
Portable engine or electric motor driven fan supplies fresh air to or exhausts foul air from confined areas. GB portable exhausters are self contained, motor or engine driven centrifugal blowers.

GAS BOOSTER
2.4 oz. to 18 oz.
Write for Bulletin CB 109
Multi-stage turbo gas pump, arrangement 8, oil lubricated. Rotary shaft seal. Stainless steel for chemical gases. Gas tight housing. Lubrication constantly maintained on shaft seal. Special gas tight couplings can be supplied for inlets and outlets.



INDUSTRIAL EXHAUSTER
700 to 55,000 CFM
Write for Bulletin MX 104R
No. 90 Industrial Exhauster completely rubber coated inside and out for use in chemical industry applications. General offers coated or special alloy equipment for use in chemical process equipment as well as for removal of corrosive fumes.



For your specific problems, call the General Blower rep in your area.
*Certified ratings authorized by NAFM.

Over 20 years of engineering and manufacturing experience.

AMERICA BREATHES EASIER with "Lungs for Industry"

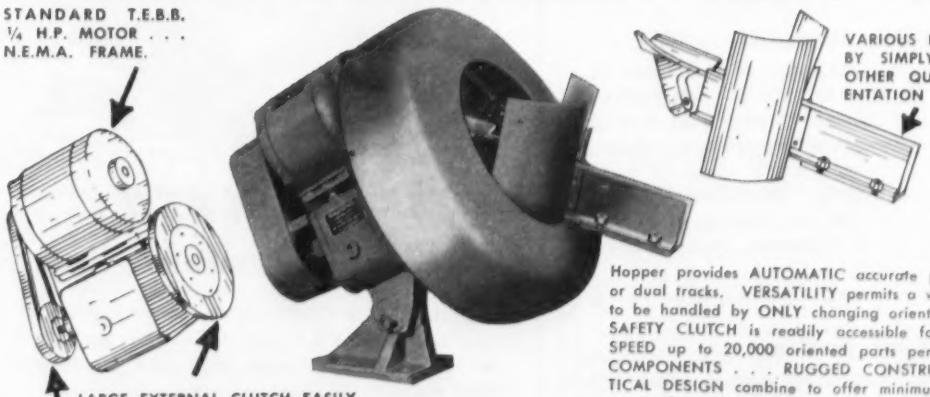
GENERAL BLOWER COMPANY
8613 FERRIS AVE MORTON GROVE, ILL.

For more details circle NED-1006 C7 on enclosed inquiry slip

Check With Arlin For New LOW COST!

STANDARD HIGH QUALITY PARTS FEEDERS

STANDARD T.E.B.B. ¼ H.P. MOTOR . . . N.E.M.A. FRAME.



VARIOUS PARTS CAN BE FED BY SIMPLY INSTALLING ANOTHER QUICK CHANGE ORIENTATION FEED TRACK.

SAME HOPPER FEEDS ALL PARTS

Hopper provides AUTOMATIC accurate parts flow on single or dual tracks. VERSATILITY permits a wide variety of parts to be handled by ONLY changing orientation track. LARGE SAFETY CLUTCH is readily accessible for quick adjustment. SPEED up to 20,000 oriented parts per hour. STANDARD COMPONENTS . . . RUGGED CONSTRUCTION and PRACTICAL DESIGN combine to offer minimum maintenance and years of low cost DEPENDABLE PARTS FEEDING.

LARGE EXTERNAL CLUTCH EASILY ACCESSIBLE FOR ADJUSTMENT.

STANDARD V-BELT DRIVE.

Arlin PRODUCTS, INC.
13543 AUBURN AVE DETROIT 23 MICHIGAN

WRITE FOR NEW LOW PRICE . . . INFORMATION AND HOPPER CATALOG.

For more details circle NED-1001 C7 on enclosed inquiry slip

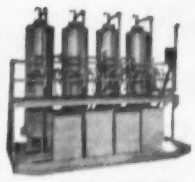
Barnstead

DEMINERALIZERS FOR PURE WATER

IN LAB QUANTITIES...

Extremely convenient where only a small amount of demineralized water is required. Flow rate 5 to 8 G.P.H. Pressure Bantam (at right) flow rate 5 to 25 G.P.H. Connects to any tap. No heat or cooling water needed.

...OR ON A GIANT SCALE



If you want demineralized water in production-run quantities you'll find what you need for your requirements from Barnstead's versatile and complete line of single-bed, mixed-bed, 2-bed, and 4-bed Demineralizers — all producing, at lowest cost, often as little as 5c per thousand gallons, water of the highest purity. Write for Catalog 127.

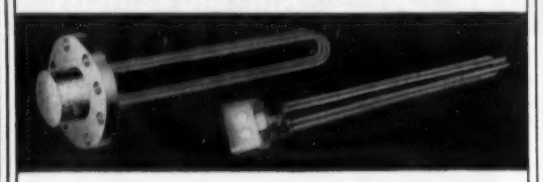
Barnstead STILL & DEMINERALIZER CO.

16 Lanesville Terrace, Boston 31, Mass.

For more details circle NED-1007 C7 on enclosed inquiry slip

When to specify

VULCAN ELECTRIC IMMERSION HEATERS



1. When application is for: Heat transfer to liquids — water, oil, wax, paraffin, asphalts, tars, solvent vapors, Dowtherm, Prestone, etc.; in tanks, boilers, urns, kettles, etc.

2. When specifications call for: Threaded bushing or flange type mounting; bayonet type, side or bottom outlet; copper, steel, stainless or alloy sheath; single or three phase; 500 to 10,000 watts; 115, 230, 460, or 550 volts; pressures up to 3500 psi.

3. When you have "hot" problems: Vulcan Engineers are ready to supply special heating units — engineered to your needs.

Write for free catalog.

VULCAN

VULCAN ELECTRIC COMPANY

DANVERS 7, MASS.

Cartridge • Strip • Tubular • Immersion Electric Heaters

Soldering and Branding Irons • Solder and Glue Pots

For more details circle NED-1008 C7 on enclosed inquiry slip

Gary GRATING

with the

HEXAGONAL CROSS BARS

Resistance Welded

FREE SAMPLE

Write for paper weight size sample and catalog N-37

ROCKWELL SPRING & AXLE CO.

Standard Steel Spring Division

4017 EAST SEVENTH AVE., GARY, INDIANA

For more details circle NED-1009 C7 on enclosed inquiry slip

New Literature & Catalogs

Nut-Running Sockets

Apex Machine & Tool Co.—Fast Lead high speed nut-running sockets with a broached hex opening permit full engagement of socket and hex nut or bolt almost instantly upon contact. Designed for continuous operation of power tools, they are described in illustrated 8-page catalog 129. Also detailed are Surface Drive sockets for use where perfect alignment of socket and nut or bolt is not always possible. Available sizes of each are listed.

For more details circle NED-1010 C7 on enclosed inquiry slip

Glove Cost Reduction Plan

Jomac Inc.—Reduction of industrial glove costs is function of 4-page folder "Jomac Cost-Reduction Analysis of Glove Use." It contains a form which, when filled in, permits company to recommend the best glove for the job. Supplementary 12-page booklet "Evidence from the Jomac Cost-Reduction Plan" shows how analysis of glove use has cut costs in typical industries.

For more details circle NED-1011 C7 on enclosed inquiry slip

Carbon-Graphite Bearings

Electro-Nite Carbon Co.—Nonlubricated bearings, made from a carbon-graphite material, are subject of 12-page illustrated catalog. They will operate under conditions up to 700° F in air and higher in neutral or reducing atmospheres, and are chemically inert. Properties, load rating charts, standard grades and application data are included.

For more details circle NED-1012 C7 on enclosed inquiry slip

Motorized Handling Equipment

Allis-Chalmers Mfg. Co.—20 pages of design, engineering, construction and operating data for fork lift trucks, towing tractors and Chore Boy platform trucks are content of illustrated catalog BU-305. Dimensions and specifications of each unit are included.

For more details circle NED-1013 C7 on enclosed inquiry slip

Gears, Transmissions & Machined Parts

New Process Gear Corp.—Constant velocity universal joint, double gear set, hypoid differential carrier, light five-speed transmission and other gears and machined parts are produced by this company. They are illustrated along with design, testing and production facilities in 24-page brochure.

For more details circle NED-1014 C7 on enclosed inquiry slip

Precision Machining Facilities

Saffran Engineering Co.—Equipment for precision machining of aircraft and turbine engines is briefly described and illustrated in 6-page folder. Company experience in this field and in turning out prototypes and pilot runs is also covered.

For more details circle NED-1015 C7 on enclosed inquiry slip

A History of Glass

What is glass? How is glass made? How is glass used? These and many other questions on the manufacturing methods, applications and history of glass are found in this profusely illustrated 64-page brochure "This is Glass." It contains many charts, drawings and 130 photographs. Available by request on company letterhead to Corning Glass Works, Box 544, Corning, N. Y.

For more details circle NED-1016 C7 on enclosed inquiry slip

Structure of the Upper Atmosphere

Those interested in the structure of the upper atmosphere will be interested in this 28-page publication "Atmospheric Models." It presents in tabular and topological form much information previously unavailable. Tables convert metrical units of measurement to the English system. It is available without charge by writing on company letterhead to General Electric Co., Missile & Ordnance Systems Dept., 3198 Chestnut St., Philadelphia, Pa.

For more details circle NED-1017 C7 on enclosed inquiry slip

Miniature Ball & Roller Bearings

Landis & Gyr, Inc.—Radial Filmoseal, radial Conrad, radial Ultra-Light roller, pilot, pivot with inner race, radial without inner race and special miniature bearings are described and illustrated in 16-page catalog. Drawings, dimension tables and mounting information are included, along with data on standards, clearances, load capacities, speed limitations, lubrication and applications.

For more details circle NED-1018 C7 on enclosed inquiry slip

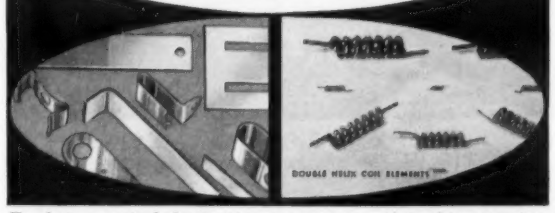
NEW "Lifetime" Dial Thermometers

You're always sure of accurate temperature readings with this new Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed 5" aluminum alloy case. Available in standard ranges to 1000°F. Easy-to-read scale 12" long. Write for details. The Foxboro Company, 663 Norfolk St., Foxboro, Mass., U.S.A.

FOXBORO Reg. U. S. Pat. Off. DIAL THERMOMETERS

For more details circle NED-1019 C7 on enclosed inquiry slip

Truflex® Thermostat Metal Parts by GENERAL PLATE Give You Consistent Performance with Economy



For better control, indication, or compensation of temperature in your products, look to Truflex Thermostat Metal parts. Here's why:

- Every piece, whether in lots of 10 or 10,000, is a duplicate of the original — eliminating rejects and costly adjustments in assembly.
- Truflex Thermostat Metal Parts and Sub-Assemblies are engineered to your specifications, ready for installation.
- Production problems, special equipment, prolonged experimental work, expensive calibrating operations are all eliminated when you use Truflex parts.
- If you prefer to make your own parts, Truflex Thermostat Metals are available in extra long coils or flat strips manufactured to exacting specifications.

Why not send us a drawing of one of your thermostat metal parts, and let us show you what we can do? No obligation.

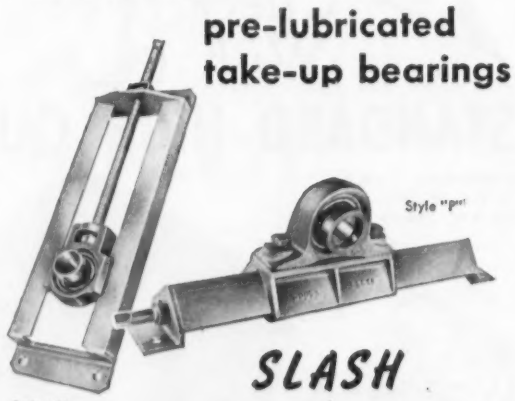
You can profit by using General Plate clad metals.

METALS & CONTROLS CORPORATION

General Plate Division 1803 Forest Street, Attleboro, Mass.

For more details circle NED-1020 C7 on enclosed inquiry slip

new... pre-lubricated take-up bearings



SLASH maintenance costs

Pre-Lubricated At Our Factory For Life • Seals Lubricant In—Dirt Out • Standard Series Ball Bearings • Self-Aligning • Frames of Welded Structural Steel • Can be Operated in Tension or Compression

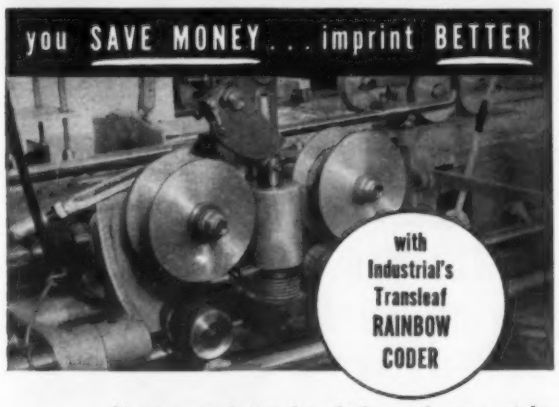
Woods T. B. WOOD'S SONS COMPANY

CHAMBERSBURG, PA.

Cambridge, Mass. Newark, N. J. Dallas, Texas Cleveland, O.

For more details circle NED-1021 C7 on enclosed inquiry slip

you SAVE MONEY . . . imprint BETTER



If you want better imprinting at lower cost for bigger profits, the Rainbow Coder is your answer!

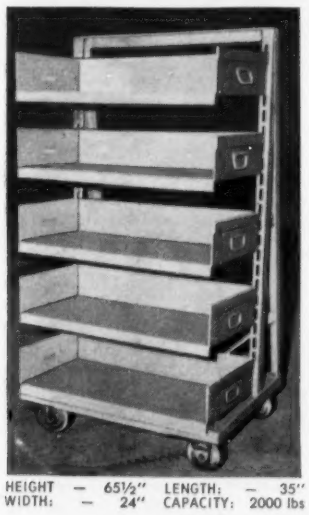
Special head and pressure arrangement assure sharp, clear quality controlled impressions in a wide color range — on any material or surface that will accept hot roll leaf imprinting. 250 impressions cost about *one cent!*

Easy and economical to install, the Rainbow is synchronized with packaging machine speed it serves — and does not require an operator. No ink, no makeready, little maintenance.

For complete details, write today. New marking equipment catalog available on request. Dept. NE

ime INDUSTRIAL MARKING EQUIPMENT company, inc.
454 BALTIC STREET BROOKLYN 17, N.Y. MAin 4-2601

For more details circle NED-1022 C7 on enclosed inquiry slip



VER-T-RACK

- EXPEDITES MATERIALS UP TO 60% FASTER
- SAVES MAN HOURS
- SAVES FLOOR SPACE
- ELIMINATES MATERAL DAMAGE
- REDUCES WORKER FATIGUE
- GREATER SAFETY FACTOR
- MAXIMUM EFFICIENCY AT MINIMUM COST

HEIGHT — 65½" LENGTH: — 35"
WIDTH: — 24" CAPACITY: 2000 lbs

Equipped with 6" roller bearing steel wheel casters

VER-T-RACK can be handled with lift truck. Trays are adjustable on VER-T-RACK

ONLY $49.50 Plus $6.60 for each tray open as shown or semi-closed

Slightly higher west of the Rockies Write today for descriptive literature

THE Vince BASNIK COMPANY
MATERIAL HANDLING DIVISION
• 2020 CENTER STREET • CLEVELAND 13, OHIO

For more details circle NED-1023 C7 on enclosed inquiry slip

RECIPROCATING SOLENOIDS

R2D-328 SOLENOID OPERATOR

Reciprocating solenoids have the trade name of "RD Solenoid Operators."

DEFINITION

An RD solenoid operator is a reciprocating solenoid unit made up of two solenoids mounted in tandem to actuate a common plunger oscillating between them.

CLASSIFICATION AND DENOMINATION

Class I. Plain RD operators for operation in open air.
Class II. Oil immersed, RDZ operators.
Class III. Explosion proof RDX operators.
Type 1. Two point operators R2D, R2DZ, R2DX.
Type 2. Three point operators R3D, R3DZ, R3DX.
Form A, side mounted, Form B, end mounted.

Operators available: RD-100, RD-300, RDX-300, RD-400, RD-700 and RD-800.

Ask for bulletins on operators, solenoids, solenoid brakes, Recipromotors and Semotors. See our catalogs in Sweet's Catalog Service.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE ST. • MILWAUKEE, WIS.

For more details circle NED-1024 C7 on enclosed inquiry slip

New Processes & Materials

CASTING RESIN for embedding and sealing uses

Lightweight Stycast 1090 epoxide casting resin can be used for embedding electronic assemblies, in low weight plastic tools and as a sealant. Being unicellular, moisture absorption is negligible. Dielectric constant and dissipation factor are low because of low density. It has good adhesion to various materials, cures at room temperature and withstands temperatures from −70 to 400° F. Made by **Emerson & Cuming, Inc.**, 869 Washington St., Canton, Mass.

For more details circle NED-1025 C7 on enclosed inquiry slip

THREAD SEALING COMPOUND dries slowly and sets soft

Plastic elasticity of Rectorseal No. 5 thread sealing compound allows a joint to be broken easily at any time without damage to threads. It will not dry in an open can or harden with age, is slow drying and sets soft. Use can be with piping carrying air, natural gas, helium, steam, propane, Freon, ammonia, water, brine and many other gases and fluids. Complementing fast drying Rectorseal No. 2, it is packaged in ¼, ½ and 1-pt and 1-qt can. Samples are available from **Rector Well Equipment Co.**, Rectorseal Div., Annex 1, 2215 Commerce St., Houston 2, Tex.

For more details circle NED-1026 C7 on enclosed inquiry slip

GASKET & SHIM SELECTOR codes Color-Plast gasketing product

Free booklet and color-coded size selector for Color-Plast washers, gaskets, shims, seals and spacers are now available. This plastic material is tough and stable, and is produced in 12 gages from 0.001 to 0.030-in. Each gage is identified by its own distinctive color, so that user, with the help of the selector, can choose the right size on sight. Color-Plast is also supplied in roll or sheet form, cut to specified dimensions. Booklet and selector are offered by **General Gasket, Inc.**, 111 Industrial Road, Clifton, N. J.

For more details circle NED-1027 C7 on enclosed inquiry slip

COPPER COLORING PROCESS produces brown, blue-black coatings

Uniform brown colors can be produced on copper and most copper alloys and blue-black and brown colors can be made on 20-per cent-zinc brasses by the Enthocolor 220 process. The oxide coatings adhere well, have no crystal spotting and permit severe deforming without flaking. Material is supplied as an alkaline salt mixture and is used at 180 to 225° F. Finishes provide a good base for subsequent painting or preparation for blackening with Ebonol C. Made by **Enthone, Inc.**, Dept. NED, 442 Elm St., New Haven 2, Conn.

For more details circle NED-1028 C7 on enclosed inquiry slip

WELDERS' EYE DROPS relieve arc light eye irritation

Eye irritation from exposure to arc radiation or intense light can be relieved by Welder's Pal eye drops. Liquid spreads readily over cornea to produce soothing and cooling effect to inflamed or gritty eyes. It is especially useful in first aid departments and to welders, steelworkers, blast furnace or open hearth operators, test or research workers. Bottle comes with unbreakable pliable plastic dropper. Available from **Carhoff Co.**, Dept. K, 11706 Kinsman Rd., Cleveland 20, O.

For more details circle NED-1029 C7 on enclosed inquiry slip

Automate your air equipment Economically with New . . .

HANNA Flo-Line Solenoid Valves

Write for Catalog 261 . . .

Illustrating Hanna Flo-Line solenoid and master valves. Dependable—safe controls for 3- and 4-way air operation to 150 psi. Sizes ¼", ⅜", ½", ¾", and 1". Circuit diagrams show how these valves are used for automatic operation of air cylinders.

Hanna Engineering Works
HYDRAULIC AND PNEUMATIC EQUIPMENT • CYLINDERS • VALVES • RIVETERS
1759 Elston Avenue • Chicago 22, Illinois

For more details circle NED-1030 C7 on enclosed inquiry slip

Another Plus . . . from Brainard

A new pneumatic stretcher to speed strapping operations . .

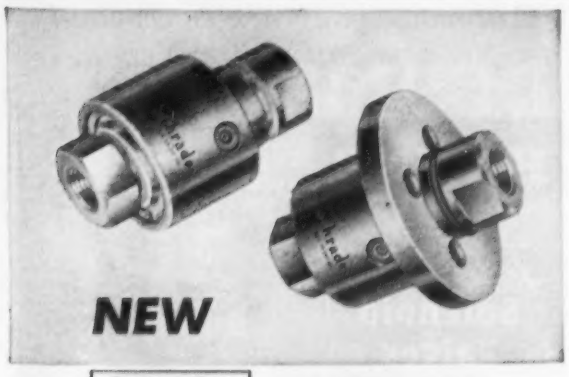
The Brainard PNE Stretcher brings increased efficiency to strapping applications using any size of tensional strapping. Unlimited takeup is provided at predetermined tensions. Degree of tension is controlled by air pressure. Operator fatigue is lessened and errors in tensioning on ordinary stretching operations are reduced. A PNE Stretcher is available for every tensional width. Each tool adjusts to all gauges in the width it handles.

For complete details on the new Brainard PNE Stretcher and other Brainard strapping materials and equipment, write . . .

Brainard Steel Strapping
SHARONSTEEL

Brainard Steel Division, Sharon Steel Corporation
Griswold Street, Warren, Ohio 238

For more details circle NED-1031 C7 on enclosed inquiry slip



Schrader® AIR-HYDRAULIC ROTATING PRESSURE JOINTS for high-speed rotation, high pressure

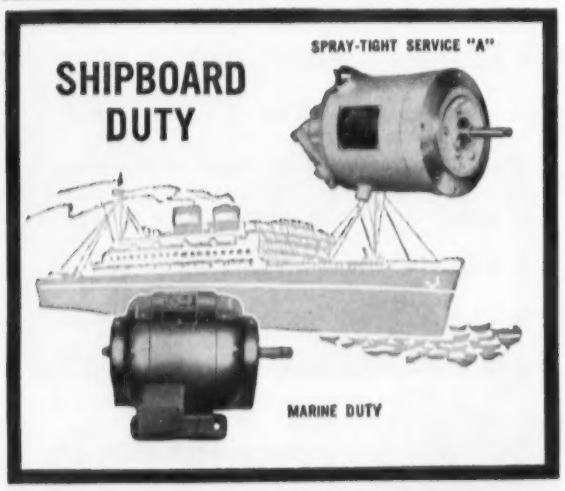
Now you can be sure of dependable compressed air or hydraulic installations through high-speed shafts and axles. Just specify Schrader's new Rotating Pressure Joints. Connecting a rotating member and a fixed unit, these compact, ball-bearing mounted joints assure a minimum of friction and long life. They are designed for pressures up to 400 psi and speeds up to 5000 rpm. Available with rugged steel mounting flanges to minimize vibrations encountered in high-speed operations of 2000 rpm or higher. Write for free Schrader catalog.

A. SCHRADER'S SON
Division of SCOVILL
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

For more details circle NED-1032 C7 on enclosed inquiry slip

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICHIGAN

For more details circle NED-1033 C7 on enclosed inquiry slip



Peerless motors for marine service meet the critical specifications established in ABS, Mil-M-17431 (DC), Mil-M-17060 (AC), AIEE 45 and U. S. Coast Guard. These motors, with standard or special mountings and features, serve aboard vessels throughout the world. Peerless will work with you to design the one motor that meets your needs best. Contact Peerless today.

ELECTRIC MOTOR DIVISION
THE Peerless-Electric® COMPANY
FANS • BLOWERS • ELECTRIC MOTORS • ELECTRONIC EQUIPMENT
1506 W. MARKET ST. • WARREN, OHIO

For more details circle NED-1034 C7 on enclosed inquiry slip

New Literature & Catalogs

Brass & Bronze Ingot Bars

I. Schumann & Co.—The C. P. Process for producing brass and bronze ingot bars employs new methods and apparatus for an additional refining process, according to 20-page illustrated brochure "Above and Beyond the Specifications." Ingot qualities such as smooth top, purity, good marking and stackability are detailed in word and picture.

For more details circle NED-1035 C7 on enclosed inquiry slip

Flareless Tube Fittings

Parker Appliance Co., Tube & Hose Fittings Div.—28-page illustrated catalog 4320 covers flareless type Ferulok tube fittings. Included is a section on fittings for mounting in new SAE straight-thread boss utilizing an O-ring for sealing. Specifications for each fitting are given, along with assembly hints.

For more details circle NED-1036 C7 on enclosed inquiry slip

Industrial Rubber Products

Holz Rubber Co.—Pivot-Flite conveyor belt attachments, pulley lagging, chute liners and special industrial rubber products are described in 4-page illustrated folder CB-1. Also covered are facilities for development, design and manufacture of special parts and such services as tank lining, roll covering, custom molding and extruding.

For more details circle NED-1037 C7 on enclosed inquiry slip

Steel Shop & Office Equipment

Aurora Equipment Co., Equipto Div.—Steel shelving, drawers, lockers, work benches and tables, counters, trucks, tool toters and stands and mail room equipment are among equipment described and illustrated in 48-page catalog 485. Available sizes, design options and specifications are covered.

For more details circle NED-1038 C7 on enclosed inquiry slip

Limit Switches

R. B. Denison Mfg. Co.—Twenty-one contact arrangements for Loxswitch machine tool limit switches are described in 8-page illustrated bulletin 956. Housings, wiring diagrams, ampere ratings, operating data and electrical characteristics for each of nine standard models are given.

For more details circle NED-1039 C7 on enclosed inquiry slip

Cylindrical Roll Neck Bearings

SKF Industries, Inc.—Engineering and technical data on multi-row cylindrical roller bearing for heavy duty service in roll neck mounting on all types of hot and cold rolling mills are found in 24-page illustrated catalog 436. Information on replacement of present bearings is presented, along with installation data and specifications.

For more details circle NED-1040 C7 on enclosed inquiry slip

Automatic Door Equipment

Clark Door Co.—Prest-O-Matic electric industrial door units and fire door operators are subject of illustrated 8-page catalog. Various models available are described and illustrations, drawings and suggested specifications are included.

For more details circle NED-1041 C7 on enclosed inquiry slip

Thermostatic Steam Traps

William S. Haines & Co.—Bourdon tube powered steam traps for process steam, heating and marine service are subject of 12-page bulletin HC-51. Thermostatic steam, float and thermostatic drip, float vent and boiler return traps in capacities from 200 to 3200 sq ft EDR are described.

For more details circle NED-1042 C7 on enclosed inquiry slip

Die Sharpening Procedure

Oberg Mfg. Co.—Intended as a guide to faster and easier carbide die sharpening, 8-page bulletin 356 constitutes a handy reference from which proper procedure can be established in customers' shops. Sharpening equipment, wheel selection, feeds and speeds, check for run-out, diamond wheel dressing, inspection prior to grinding, and sharpening the die are covered.

For more details circle NED-1043 C7 on enclosed inquiry slip

Roof Maintenance Analysis

Labco, Inc.—Roof maintenance problems are analyzed and properties and uses of roof maintenance materials are discussed in 12-page technical bulletin. Causes of roof defects, correction of alligatored asphalt surfaces and simple rules for roof maintenance are some of the subjects covered.

For more details circle NED-1044 C7 on enclosed inquiry slip

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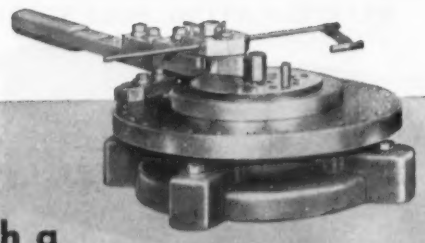

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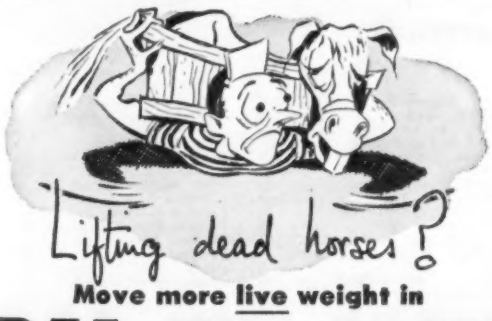

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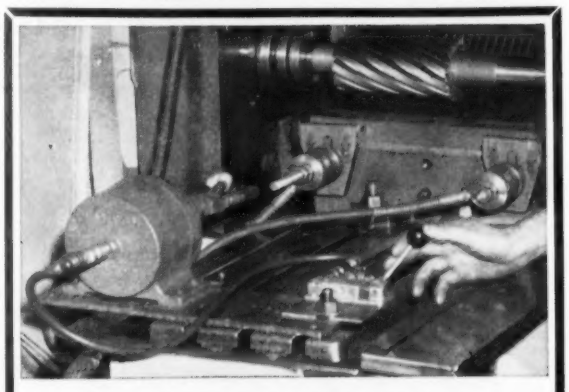

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ROLLER TOP LIFT TABLE hydraulic unit lifts 20,000 lb

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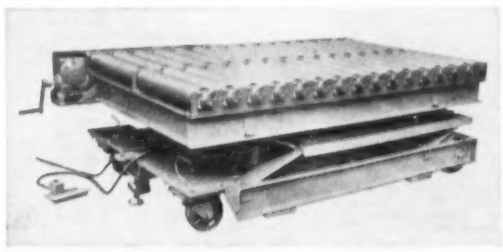
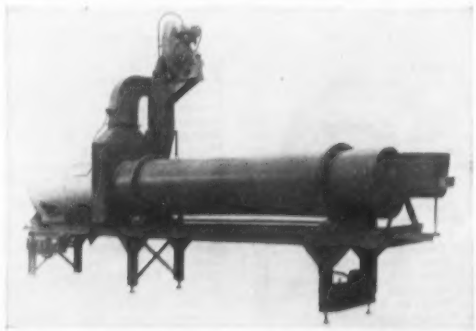


large sprockets on each roller. Table top is hydraulially raised and lowered with fractional-inch accuracy by two-way foot pedal. Unit shown has 20,000-lb lift capacity. Used to handle large heavy steel sheets, table has a gear reduction unit and hand crank for moving the sheet into position. It employs four 3-in. hydraulic cylinders and raises loads from height of 32 in. to 48 in. A 30,000-lb capacity table with six cylinders is also available. Made by **West Bend Equipment Corp.**, 329 Water St., West Bend, Wis.

For more details circle NED-1051 C7 on enclosed inquiry slip

ROTARY DRYERS designed for granular materials

Concentric fire-tube design causes the gases to travel the full length of Dual-Flow rotary dryers before making contact with the feed. This prevents direct



flame impingement and allows indirect radiant heating. Entire system is maintained under slight negative pressure. Dryers handle granular materials without loss of fines. Capacities of two models offered are 1 and 2 tons, based on bone dry delivery of silica sand with 10 per cent moisture. Units evaporate 200 and 400 lb of water per hour, respectively. Dryers consist of concentric steel tubes and are furnished with oil burner, primary air blower, automatic temperature control, indicating pyrometer, exhaust blower, dust cyclone, positive displacement feeder and gearmotor drive. Made by **Carpco Mfg., Inc.**, Box 3272, Jacksonville 6, Fla.

For more details circle NED-1052 C7 on enclosed inquiry slip

ROCK-TRED News RESN-X EDITION

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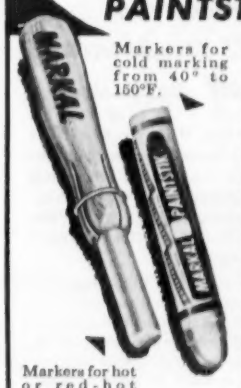

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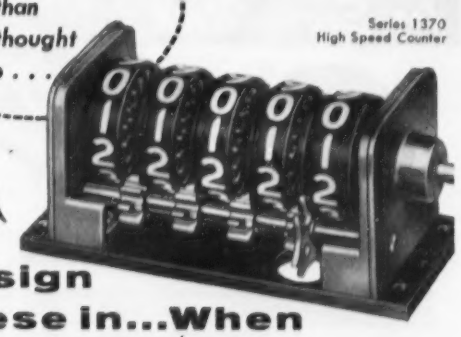

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For if you'll give us a chance to work with you, right from the beginning, chances are we can save you time and money by adapting or modifying a *standard* Veeder-Root Counter to your needs . . . where you might get into a costly special job if you went about it alone. What's more, you save time in your engineering, purchasing and assembly departments.

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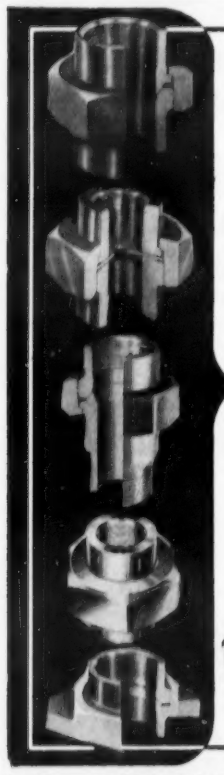

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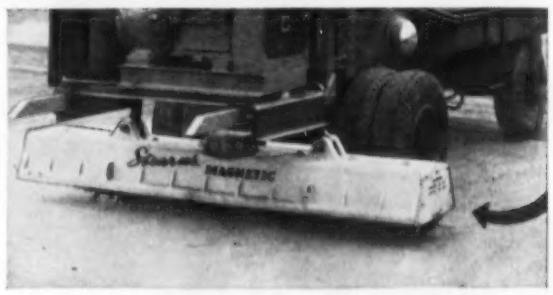

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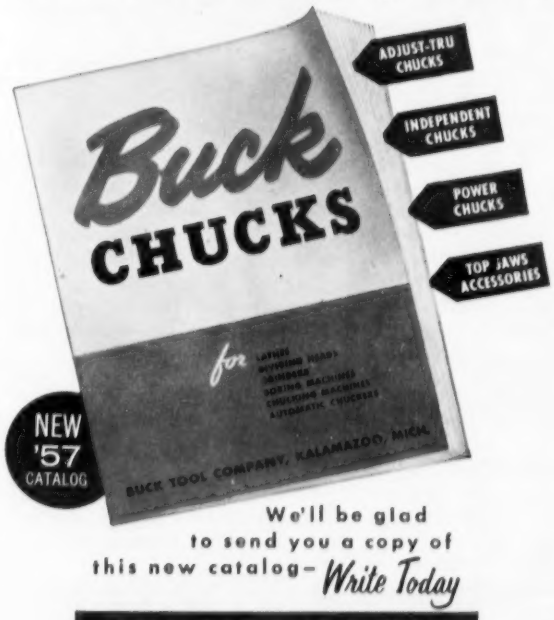

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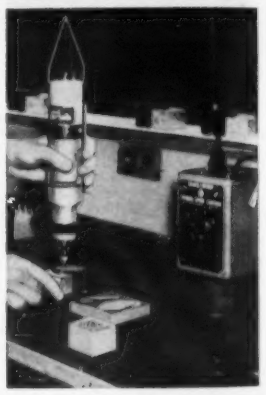

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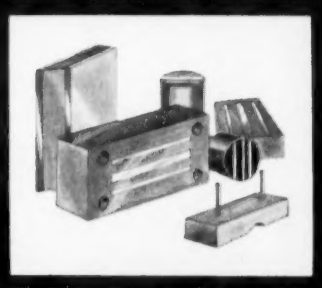

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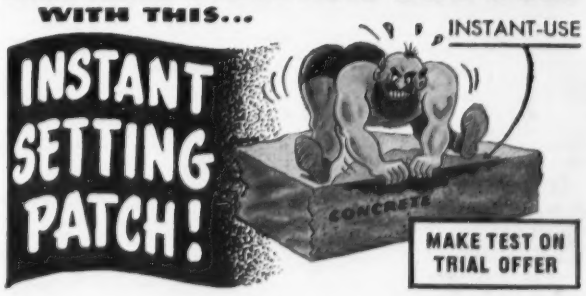

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